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ABSTRACT

The Tennessee Nutrition Education and Training (NET) program is part of a U.S. Department of Agriculture effort to develop a coordinated nutrition education program for children from preschool through grade 12. For this second-year evaluation, researchers associated with the University of Tennessee collected data for the evaluation of program components. Formative evaluation concerned expansion grants, youth advisory councils, student involvement, contract negotiations, NET materials, and competency workshops. Summative evaluation was focused in three areas: (1) site visits to pilot projects using NET program development grants to improve nutrition education for children; (2) post-workshop assessments of 1980 Nutrition Education Summer Workshops; and (3) collection of comparative data concerning nutrition knowledge, attitudes, behavior, and perceptions from a statewide sample of Tennessee public school students, parents, teachers, principals, and food service personnel. A pretest-posttest comparison group design was used to assess the effectiveness of the instructional plan in promoting student learning related to the objectives. The assessment instruments were administered to more than 7,000 students in 36 elementary schools located throughout the state. Assessments are included. (Author/MLF)

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EVALUATION OF THE TENNESSEE NUTRITION EDUCATION AND TRAINING PROGRAM

1981

FINAL REPORT

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EVALUATION OF THE TENNESSEE NUTRITION EDUCATION AND TRAINING PROGRAM

1981

SUMMARY

Background

The Tennessee Nutrition Education and Training (NET) Program is a component of a national effort to develop a coordinated nutrition education program for children from preschool through Grade 12. This effort has received federal funding through the U.S. Department of Agriculture. Origins of the program can be traced to Public Law 95-166, the National School Lunch Act and Nutrition Amendments of 1977, which provided under Section 19 for a program of "Nutrition Education and Training." This legislation authorized funding to carry out a nutrition information and education program through a system of grants to state agencies to provide for (a) training in nutrition for educators and school food service personnel, (b) training in food service management for school food service personnel, and (c) conduct of nutrition education activities in schools and child care institutions.

In 1979 Tennessee's State NET Advisory Council recommended that the initial thrust of NET activities in Tennessee be directed toward teachers and food service personnel in elementary schools since this approach offered the dual possibilities of reaching large numbers of individuals readily and of changing food habits at the time these habits were being formed. The Advisory Council also recommended using a team approach--primarily teams composed of a teacher and a food service manager--to build support and provide reinforcement for nutrition education in schools in Tennessee. This team approach was employed during 1980 and 1981 to provide nutrition education training and increase nutrition education activities in schools and child care institutions throughout the State.

During 1980-81 a team of evaluators associated with the Bureau of Educational Research and Service (BERS) at the University of Tennessee, Knoxville provided a second year of program evaluation for the Tennessee NET project (see Banta, et al. Evaluation of the Tennessee Nutrition Education and Training Program - 1980. The Bureau of Educational Research and Service, University of Tennessee, October 1980). The evaluation included both formative and summative components.

In order to provide the State NET Coordinator with management information concerning the various activities which were undertaken to implement objectives for the NET program, the evaluators obtained answers to evaluation questions concerning the following:

.Expansion Grants,
.Youth Advisory Councils,
.USDA requirement for student involvement,
.Contract negotiations,
.NET materials,
.TENN Competency Workshops, and
.Other evaluation activities.

The summative component of the evaluation included:

- Site visits to five pilot projects using NET Program Development Grants to improve nutrition education for children,
- Post-workshop assessments of 1980 Nutrition Education Summer Workshops, and
- Collection of comparative data concerning nutrition knowledge, attitudes, and practices, and perceptions of nutrition education from a State-wide sample of Tennessee's public school students, parents, teachers, principals, and food service personnel.

Results of Formative Evaluation Procedures

Expansion Grants

Teams of teachers and food service managers that participated in the 1979 NET Summer Workshop program were afforded the opportunity to apply for $200 Expansion Grants which could be used for supplementary nutrition education activities. Only one-third of the eligible teams applied for an Expansion Grant. The evaluators contacted those who did not apply and found that the chief reason for failure to participate was the perception that the application procedure was too complicated or time-consuming. Many respondents also commented that too many requirements were associated with the "Back Home Action Plan" which was specified, and that too many progress reports were required.

State NET staff requested that the 40 teams receiving Expansion Grants compile a scrapbook of activities carried out with grant funds. The evaluators designed a Scrapbook Summary Form to collect information from grant recipients about the success of their activities. Summary forms were completed by two-thirds of the teams holding Expansion Grants.

Mean success ratings indicated that teams were at least "moderately successful" in meeting all seven Expansion Grant objectives. They were highly successful in including student nutrition activities in the classroom and in the lunchroom, and less successful (still, "moderately" so) in involving parents in nutrition education and conducting sharing sessions to acquaint others with the NET program. Expansion Grants appeared to be an efficient way of utilizing NET funds to increase the level of nutrition education activities for school children in Tennessee.

Management Activities of State NET Staff

The evaluators asked the State NET staff to record the frequency of activities which were required to implement certain objectives in the 1981 State NET Plan. The staff described Youth Advisory Councils in seven presentations which reached a total of 206 teachers, food service managers, and school administrators. Student involvement as part of the USDA requirement in the Child Nutrition Program was described in six meetings involving a total of 85 school professionals. Four of the five contracts proposed in the 1981 State Plan were negotiated by the staff; one contract was cancelled due to insufficient funds.

NET Materials

A collection of books, pamphlets, films, and filmstrips on nutrition-related topics called The Goody Box was made available during SY 1980-81 to all school systems in Tennessee. Of 148 school systems in the State 130 elected to use the collection. Contact persons responsible for lending the collection to teachers throughout their school systems were asked to complete a usage report form, and almost three-fourths of these individuals did so. According to the records some materials were used with as many as 16,500 students during the year. Items used most extensively with elementary, middle, and high school students in 1979-80 again topped the usage lists in 1980-81. Most respondents made only favorable comments about items in the Goody Box; but as in the past, some requested the addition of films and filmstrips, materials concerning dietary deficiencies, and books for students about nutrition. Contact persons expressed the need to improve communication about, and accessibility to, the Goody Box collection in order to increase circulation of the materials.

"Soup to Nuts" is a ten-episode educational television series prepared by the Georgia Public Television Network and provided by the Tennessee NET Program to educational television stations and regional nutrition specialists throughout the State. Initial interest in the series was high: over 200 requests for the teacher's handbook were received from school professionals. However, utilization was limited because the series was produced on video cassettes and thus could be used only in schools having a cassette-capable videotape recorder or served by an ETV channel. In addition, the series did not become available to ETV stations until late in the year, after many already had communicated their spring schedule to viewers. A mailing of evaluation forms to the 200 individuals on the teacher handbook request list yielded only ten responses, most of which were from urban areas of the State. Approximately 70 percent of the respondents rated the series "very good" or "excellent" in achievement of its five stated goals.

The Goody Bag, a newsletter for elementary teachers, was issued four times during 1980-81. Ideas for teaching nutrition constituted the principal topic of articles in the publication. The nutrition specialist who evaluated the content of the newsletter characterized it as "accurate, varied in content, and presented in an attractive and interesting format." She concluded that the Goody Bag "served both as a means of keeping teachers informed about nutrition issues and NET activities, and as a means of generating enthusiasm about nutrition education in the classroom." The specialist recommended that the newsletter be continued, that the number of issues be increased, and that a similar publication be developed for teachers in grades 7-12.

TENN Competency Workshops

Several members of the evaluation team worked with another team of UTK faculty and graduate students to accomplish the following:

(1) develop and validate a set of desirable nutrition competencies for students in grades K-12,
(2) design an instructional plan (the TENN Instructional Plan) for elementary level teachers and food service personnel which would promote student learning of the nutrition competencies,
(3) conduct regional workshops during Summer 1980 for the purpose of training school professionals to use the instructional plan to provide nutrition education for students, and
(4) construct a series of developmentally appropriate measuring instruments to test students' knowledge of the nutrition competencies.

The TENN Competency Workshops described in (3) above were evaluated by the faculty and graduate students who presented them. The overall reaction of participants was quite positive. Workshop activities considered most valuable were (1) the general overview of the instructional plan; (2) the display, review, and evaluation of available resource materials; and (3) small group discussions. A film and a problem-solving activity were viewed as the least valuable workshop activities.

Workshops for Personnel in Residential Child Care Institutions

In October 1980 State NET staff conducted four nutrition education workshops which were attended by 120 persons representing residential child care institutions in Tennessee. RCCI personnel who participated were principally house parents, food service personnel, or administrators. An evaluation form completed by participants at the conclusion of each workshop produced evidence that the workshop content was considered relevant to the needs of those in attendance. The materials which were distributed were identified as the most valuable element of the workshop. Other content viewed as helpful to participants included presentations on menu planning and information on type and amount of food needed by children.

At the four RCCI workshops most of the participants prepared a "Back Home Action Plan" describing their intentions to incorporate nutrition education in their work. In May 1981 a brief open-ended questionnaire was sent by the evaluators to those individuals who had submitted action plans. Responses received from fewer than 25 percent of those contacted indicated that knowledge acquired during the workshops concerning menu planning and the nutrition needs of children had been applied in the work setting of RCCI workshop participants.

Results of Summative Evaluation Procedures

Program Development Projects

The evaluators conducted mid-year and end-of-year site visits to assess the effectiveness of five demonstration projects that had been carried out with NET funds. In general these projects were designed to provide nutrition education for children of various ages; most included development of support materials such as curriculum guides or learning modules. Individual project reports and an overall summary were prepared which addressed the following program elements: purpose and objectives, implementation strategies, personnel, materials selection/development, parental/community involvement, and project outcomes.

The program development projects provided an opportunity for personnel to develop approaches to nutrition education and staff development which reflected the unique circumstances of local education systems. Each project made progress toward integrating nutrition education in the curriculum in a way that reflected the individual needs and interests of the children to be served. Project directors demonstrated a need for guidance and/or support in conducting needs assessments, budgeting, and program evaluation.

NET Summer Workshops (NETSW)

During Summer 1980 four regional inservice workshops were conducted by State NET staff for teams composed of a teacher and the food service manager from 51 schools. Evaluation forms completed at the conclusion of each workshop provided evidence that more than three-fourths of the participants were willing to rate as good or excellent the goals and operation of the workshop and the personal effectiveness of workshop facilitators. Increased knowledge of nutrition was the workshop outcome which participants valued most. At each of the four workshops participants' mean post-workshop scores on a test of nutrition knowledge were significantly higher than their mean scores at the beginning of the workshop.

At follow-up sessions held in Spring 1981 75 percent of those who participated in the four summer workshops completed a Follow-Up Questionnaire designed by the evaluators. At that time 92 percent of the respondents felt their 1980 NETSW training had enabled them to be "effective" or "very effective" in making nutrition education a part of their school curriculum. "Sharing sessions" designed to acquaint others with the NET program had been conducted by 99 percent of those responding. The sharing sessions and other activities of NETSW participants provided a total of 19,889 Tennesseans with information about nutrition education during 1980-81. Eighty-six percent of the respondents in Spring 1981 reported that they had been successful in implementing the back home action plan for nutrition education which they had designed during the summer workshop.

State-wide Nutrition Education Assessment

In order to assess the effectiveness of the TENN Instructional Plan (presented to school professionals via TENN Competency Workshops) in improving nutrition knowledge, attitudes, and practices, and perceptions of nutrition education, the evaluators designed a series of developmentally appropriate testing instruments for students in grades K-12, as well as for parents, teachers, administrators, food service managers, and food service personnel. The instruments were administered in Spring 1980 and again in Spring 1981 to students and adults associated with four elementary schools (grades K-6) and one secondary school (grades 7-12) in each of Tennessee's nine development districts. The first year of testing furnished baseline data against which future progress toward mastery of the competencies comprising the TENN Instructional Plan might be compared.

Two of the elementary schools in each development district were designated "treatment" schools because personnel from those schools received training in the use of the TENN Instructional Plan (at TENN Competency Workshops) during Summer 1980. Personnel in "comparison" schools did not receive training or instructional materials until Summer 1981. Test scores obtained in Spring 1980 for students and adults associated with treatment and comparison schools were compared with test scores on the same set of instruments administered in Spring 1981.

Changes in attitudes and behavior take time and must be preceded by the acquisition of knowledge. With only one year of experience with an instructional plan that was designed to effect change in knowledge, attitudes and practices over the entire elementary school experience, students in treatment schools demonstrated encouraging gains in knowledge of nutrition concepts.

On the Knowledge Scale of the assessment instruments students in treatment schools showed greater gains than their counterparts in comparison schools at grade levels K, 1, 4, and 6--a majority of the grades tested.

Gains on the Attitudes Scale were greater for the treatment group at grade levels 1, 3, 4, and 6--again a majority of the grades tested. Gains on the Practices Scale were greater at grade levels 4 and 6. Some differences favoring the students exposed to the TENN Instructional Plan were demonstrated for five of the seven grade levels involved in Tennessee's NET assessment program.

Analysis of the items dealing with perceptions of NET, nutrition education, and the school food service program, revealed the following effects:

- First graders in treatment schools were more likely to say they ate the lunch fixed at school than were those in comparison schools. They were also more likely to say they liked to help decide what would be served for lunch and that they had an opportunity to do this.
- Second and third graders in treatment schools were more likely to say they enjoyed learning about foods that were good for them.
- Third and fifth graders in treatment schools were more likely to indicate that they thought more different kinds of foods should be served at school.
- Fourth graders in treatment schools more often agreed that they liked the food fixed at school.
- First and sixth graders in treatment schools were more likely than their comparison counterparts to express interest in having a part in planning what would be served for lunch at their schools.
- Administrators at treatment schools were more likely to be satisfied with the level of nutrition knowledge of their faculty than were administrators at comparison schools.
- Food service personnel at treatment schools were more likely than counterparts at comparison schools to agree that teachers should be involved in planning the food service program.
- Teachers at treatment schools were more likely to express the belief that students should be involved in planning the school food service program.
- Parents of children at treatment schools expressed more interest in furthering their knowledge of nutrition than did parents of children in comparison schools.

Observational techniques were employed to determine the approximate amount of food wasted by students eating the school lunch at treatment and comparison schools. No differences were found in plate waste for the two groups. However, it had been anticipated that food consumption behavior would not show change rapidly since an increase in nutrition knowledge must precede an improvement in food selection. Moreover, several weaknesses in the single case observation method of estimating plate waste were noted.

A single year is an insufficient amount of time over which to gauge the effects of a curriculum which is designed sequentially to promote development over the entire elementary school experience. Changes in attitudes and practices related to nutrition cannot be expected until a substantial increase in the individual's knowledge about nutrition has taken place. Given these caveats, the TENN Instructional Plan for grades K-6 has been demonstrated to be effective in producing gains in student knowledge of nutrition and thus holds promise for improving nutrition-related attitudes and practices among school children in Tennessee.

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CHAPTER ONE

INTRODUCTION

Background of NET in Tennessee

The Tennessee Nutrition Education and Training (NET) Program is a component of a national effort to develop a coordinated nutrition education program for children from preschool through Grade 12. This effort receives federal funding through the U. S. Department of Agriculture. Origins of the program can be traced to Public Law 95-166, the National School Lunch Act and Nutrition Amendments of 1977, which provided under Section 19 for a program of "Nutrition Education and Training." This legislation authorized funding to carry out a nutrition information and education program through a system of grants to state agencies to provide for (a) training in nutrition for educators and school food service personnel, (b) training in food service management for school food service personnel, and (c) conduct of nutrition education activities in schools and child care institutions.

In 1979 Tennessee's State NET Advisory Council recommended that the initial thrust of NET activities in Tennessee be directed toward teachers and food service personnel in elementary schools since this approach offered the possibilities of (1) reaching large numbers of individuals readily, and (2) changing food habits at the time these habits were being formed. The Advisory Council also recommended using a team approach--primarily teams composed of a teacher and a food service manager--to build support and provide reinforcement for nutrition education in schools in Tennessee. This team approach was employed during 1980 and 1981 to provide nutrition education training and increase nutrition education activities in schools and child care institutions throughout the State.

Tennessee NET Goals and Subgoals for 1981

The State NET Advisory Council and the State NET Coordinator developed the following overall goals to direct Tennessee's NET Program in 1981:

1. To utilize a school-parent-community team effort to encourage good eating habits and teach children the relationship between food and health.
2. To instruct educators in nutrition education and in the use of the cafeteria as a learning laboratory.
3. To train food service personnel in nutrition and food service management and to encourage the use of the cafeteria as an environment for learning about food and nutrition.
4. To select/develop appropriate educational materials and curricula.

During Spring 1980, when the Coordinator was writing the 1981 Tennessee NET Plan, the evaluators met with her twice to discuss the substance and form of the 1981 objectives. Subsequently the evaluators took the Coordinator's ideas and stated the '81 objectives in measurable terms in order to facilitate evaluation. These objectives formed a sound basis for the 1981 evaluation.

Tennessee NET Evaluation Design for 1981

In October 1979 the Tennessee Department of Education contracted with the Bureau of Educational Research and Service at The University of Tennessee, Knoxville to obtain an evaluation of the 1980 Tennessee NET Program. The evaluation period extended from October 1, 1979 to June 30, 1980. In July 1980 the contract was renewed for a second year.

The program evaluation conducted by personnel in the Bureau of Educational Research and Service included both formative and summative components.

Formative Evaluation Activities

In order to provide a continuous flow of management information to the State NET Coordinator, the evaluators designed methods for obtaining answers to evaluation questions concerning the following areas of program operation:

- Expansion Grants,
- Youth Advisory Councils,
- USDA requirement for student involvement,
- contract negotiations,
- NET materials,
- TENN Competency Workshops, and
- other evaluation activities.

Expansion Grants. Participants in the 1979 Nutrition Education and Training Program Summer Workshops (NETSW) were invited to apply for "Expansion Grants." These were $200 grants to be used to augment local funds for nutrition education and to increase NET activities in the schools of NET participants. Forty teams were awarded expansion grants for the 1980-81 school year. Graduate Research Assistant Pamela Freeman, a doctoral student in educational administration, developed a brief questionnaire which was sent in November to teams that did not apply for Expansion Grants in order to determine why they did not apply. Ms. Freeman also has developed an instrument to provide answers to the following evaluation questions:

- Are teams that received Expansion Grants including parents in their nutrition-related activities?
- Are activities designed by elementary school teams receiving Expansion Grants effective in increasing student consumption of nutritious food?
- Are teams receiving Expansion Grants promoting lunchroom activities?
- Are teams receiving Expansion Grants using school cafeterias as learning labs for students?

Information obtained from these two questionnaires is presented in Chapter 5.

Youth Advisory Councils. During Fall 1980 the State NET Coordinator was asked to keep a log of NET presentations in which a description of Youth Advisory councils was included. Data from that log can be found in Chapter 2. Further, Graduate Research Assistant Wilma Jozwiak, a doctoral student in child and family studies, developed a short questionnaire to answer the following evaluation questions concerning Youth Advisory Councils:

- How usable are materials purchased for YACs with NET funds?
- How frequently or widely are these materials used?

However, the questionnaire was not mailed because she was unable to obtain from YAC leaders a list of 1980-81 YAC participants.

USDA requirement for student involvement. The State NET Coordinator also was asked to keep a log of NET presentations which included a description of the USDA requirement for student involvement in the Child Nutrition Program. Information obtained from this log is presented in Chapter 2.

Contract negotiations. In addition, the State Project Coordinator was asked to provide information concerning the negotiation of contracts described in the 1981 State Plan. Details are included in Chapter 2.

NET materials. For the second consecutive year contact persons from 130 school systems throughout Tennessee were asked to submit a usage report for materials (books, pamphlets, films, and filmstrips on nutrition and nutrition-related topics) made available by the NET project to teachers in their systems. Data from these reports appear in Chapter 8.

Also for the second year Dr. Jean Skinner, Professor of Nutrition at The University of Tennessee, Knoxville, was asked to examine the State NET newsletter, the "Goody Bag." Her evaluation report can be found in Chapter 8.

Wilma Jozwiak developed a questionnaire designed to answer the following evaluation question:

- Are SECA ETV nutrition lessons for students in Grades 7-9 usable, and are they being used?

Her findings appear in Chapter 8.

Ms. Jozwiak also developed methods to obtain information concerning the following questions:

- How many schools request teacher guides for SECA ETV nutrition lessons for students in Grades 7-9?
- How are additional nutrition education films and curriculum materials being acquired and used?

However, because of cutbacks which took place during the year in the State Media Center, she was unable to answer these questions.

TENN Competency Workshops. The UTK evaluation team worked with TENN Competency Workshop staff to obtain answers to the following questions:

- What are desirable student competencies in nutrition education?
- What activities developed by workshop participants are designed to promote parent involvement in nutrition education?
- How did participants in the 1980 TENN Competency Workshops perceive the effectiveness of the workshop they attended?

Information concerning these questions is presented in Chapter 9.

Other evaluation activities. This category included the following activities:

- Working with a consultant, if necessary, to assess usage and usability of the teaching modules that relate nutrition education to Tennessee history.
- Working with the State NET Staff and consultant, if necessary, to determine the effectiveness of nutrition education training for day care staff.
- Working with the State NET Staff and USDA Regional Office, if necessary, to develop evaluation procedures for 1980 workshops for Residential Child Care Institution teachers/houseparents and RCCI personnel responsible for food planning and preparation.

The UTK evaluation team was not approached during FY 81 about the need to assess the usability and usage of the teaching modules relating nutrition education to Tennessee history.

The evaluation project director and coordinator met with the day care project director and coordinator to discuss general plans for the day care project. However, the evaluation team received no specific requests for assistance with evaluation activities during FY 81.

During FY 80 the UTK evaluation team developed assessment instruments designed to answer the following question:

- What changes (if any) have occurred in nutrition attitudes, behaviors, and perceptions as a result of 1980 workshops for RCCI teachers/houseparents, and personnel responsible for food planning and preparation?

However, since many of the participants in workshops held in 1980 for RCCI personnel could not read or write, the State NET Coordinator concluded that it was not reasonable to administer these instruments. After examining the available RCCI workshop data, Graduate Research Assistant Lynne Roberson, doctoral student in nutrition, developed a questionnaire to assess RCCI workshop participants' effectiveness in implementing Back Home Action Plans developed by teachers and houseparents during the workshops. These questionnaires were mailed to participants during Spring 1981. A report of findings appears in Chapter 7.

Summative Evaluation Activities

In addition to the formative evaluation activities the evaluators also carried out a summative evaluation component designed to assess the quality of NET Program outcomes. Summative evaluation was focused in three areas: (1) site visits to pilot projects using NET Program Development Grants to improve nutrition education for children, (2) post-workshop assessments of 1980 Nutrition Education Summer Workshops (NETSW), and (3) collection of comparative data concerning nutrition knowledge, attitudes, and behavior and perceptions of nutrition education from a statewide sample of Tennessee public school students, parents, teachers, principals, and food service personnel.

Program Development Grants. A survey form for the review of Program Development Projects was developed by the UTK evaluation team in FY 80. This instrument was designed to be used during initial and follow-up site visits to obtain information helpful in answering the following question:

- How well are pilot projects using Program Development Grants to improve nutrition education?

Lynne Roberson and Graduate Research Assistant Cheryl Bittle, doctoral student in nutrition, contracted with the evaluation project director to visit the following six project sites:

- Hamilton County at Chattanooga
- Jones County at Lewisburg
- Knox County at Knoxville
- Loudon County at Lenoir City
- Tennessee Technological University at Cookeville
- University of Tennessee at Martin

The Sumner County project was visited by the State Project Coordinator by prior agreement. Reports of findings derived through site visits may be found in Chapter 6.

Assessment of 1980 Nutrition Education and Training Summer Workshops (NETSW). During Summer 1980 workshops similar to those held in Summer 1979 for teams of elementary teachers and food service managers were conducted by State NET Staff. Four regional workshops were conducted, with 51 teacher-food service manager teams taking part. NETSW instruments developed by the UTK evaluation team during FY 80 were designed to answer the following evaluation questions:

- How did NETSW-80 participants perceive the effectiveness of the workshop they attended?
- How effective was NETSW-80 in promoting participant learning of nutrition education concepts?

Data obtained from these instruments are presented in Chapter 3.

A NETSW-80 follow-up questionnaire was developed by Graduate Research Assistant Dulcie Peccolo, doctoral student in child and family studies. This instrument was designed to provide answers to the following evaluation questions:

- Have students of teachers who participated in NETSW-80 increased their knowledge of nutrition education concepts?
- Are teams which participated in NETSW-80 utilizing their Back Home Action Plans (BHAPs) in their schools during 1980-81?
- Have activities developed in Back Home Action Plans increased student consumption of nutritious foods?
- Are students becoming involved in decision-making activities regarding school feeding programs?
- Have child nutrition programs been effective as learning labs for students?

A report of these findings appears in Chapter 4.

Statewide Nutrition Education Assessment. The ultimate criterion for assessing the effectiveness of Tennessee's NET Program is the impact of the program on the nutrition knowledge, attitudes, and behavior of the State's children and youth. One cannot assess the impact of a program until that program has been defined in scientific, measurable terms. Prior to 1980 the objectives of the Tennessee NET Program had not been defined in terms of the specific knowledge, attitudes, and behaviors that should be promoted for students throughout the State. The curriculum presented in the Five State Nutrition Education Project (1975) was used to train Tennessee's public school personnel in 1979, but behavioral outcomes for students were not identified in that plan. Consequently, the evaluators were not able to assess in a meaningful way the effects of the 1979 NETSW training on the elementary school students whose teachers implemented Back Home Action Plans designed in the summer workshops.

By 1980 problems associated with the absence of statewide nutrition education objectives for students were evident to the Tennessee NET Coordinator. The 1980 State Plan specified that a new contract would be established to assemble/develop nutrition competencies for Tennessee students in Grades K-12 and to conduct a series of training workshops for school professionals that would acquaint them with the competencies and with materials and teaching strategies that could be used to promote student mastery of the competencies.

The contract for development of student competencies in nutrition education also was awarded to personnel associated with the Bureau of Educational Research and Service at The University of Tennessee, Knoxville. The evaluators and the competency project personnel thus were able to work closely to achieve the related goals of both projects. By Spring 1980 the K-12 competencies had been written, the associated training for school professionals had been planned, and two schools in each of Tennessee's nine development districts had been identified to participate in the training workshops to be held during Summer 1980.

The evaluators participated in developing and field testing paper-and-pencil instruments to measure student achievement of the nutrition competencies. Since the adults responsible for promoting student mastery of the competencies first needed to master the competencies themselves, companion instruments also were designed for teachers, principals, school food service workers, and parents.

During April and May 1980 the instruments designed by the University of Tennessee project personnel were administered to students and adults associated with four elementary schools (Grades K-6) and one secondary school (Grades 7-12) in each of the State's nine development districts. This procedure furnished baseline data against which future progress toward mastery of the competencies might be compared.

Two of the elementary schools in each district were designated as "treatment" schools because the principals of those schools had been invited to send a team of participants to the Summer 1980 TENN Competency Workshops. Two of the elementary schools were designated as "comparison" schools because their personnel were to receive no training in nutrition education during 1980. (Personnel in comparison schools were promised training in workshops to be held in 1981.) Test scores for students and adults associated with treatment and comparison schools in Spring 1980 were to be compared with test scores on the same set of instruments administered in Spring 1981 to determine whether the training in nutrition offered in the TENN Competency Workshops in Summer 1980 had been effective in promoting greater gains for treatment school personnel than for comparison school personnel.

No training was provided in 1980 for secondary school personnel, so there could be no designation of treatment or comparison schools. Thus the administration of assessment instruments in Grades 7-12 constituted a field test of instruments at the secondary level.

Posttesting for the statewide nutrition education assessment was conducted during Spring 1981. Information obtained from these posttests was compared with baseline data gathered in Spring 1980 in an attempt to answer the following summative evaluation questions:

- Do parents demonstrate increased knowledge of nutrition principles?
- Is parent knowledge of nutrition concepts considered desirable for students improved?

- Has student knowledge regarding nutrition increased?
- Has student ability to solve nutrition-related consumer and health problems increased?
- Has student consumption of nutritious foods as indicated by performance on paper-and-pencil measures and analysis of plate waste data improved?
- Has student involvement in decision-making activities related to school food service programs increased?
- Has teacher knowledge of nutrition concepts considered desirable for students improved?
- Has teacher use of child nutrition programs as learning laboratories increased?
- Has administrator and food service personnel knowledge of nutrition concepts considered desirable for students increased?

Dr. Jo Lynn Cunningham, Professor of Child and Family Studies at The University of Tennessee, Knoxville, was responsible for analyzing data concerning nutrition knowledge, attitudes, and behaviors; Ms. Wilma Jozwiak dealt with perceptions of nutrition education. Dr. Jean Skinner analyzed food consumption data. Their reports are presented in Chapter 10.

Organization of the Report

Formative evaluation activities are summarized in the chapters noted below:

- Expansion Grants - Chapter 5
- Youth Advisory Councils - Chapter 2
- USDA requirement for student involvement - Chapter 2
- Contract negotiations - Chapter 2
- NET Materials - Chapter 8
- Workshops for Personnel in Residential Child Care Institutions - Chapter 7
- TENN Competency Workshops - Chapter 9

Summative evaluation activities are summarized in the following chapters:

- Program Development Projects - Chapter 6
- Participant Data Collected During the 1980 Nutrition Education and Training Summer Workshops - Chapter 3
- Follow-up Assessment of Nutrition Education and Training Summer Workshops - Chapter 4
- Statewide Nutrition Education Assessment - Chapter 10

CHAPTER 2

DATA FROM STATE NET STAFF

Sources of Data for NET Evaluation

Data for the 1981 evaluation of Tennessee's Nutrition Education and Training (NET) Program were derived from four principal sources:

(1) State NET Staff

(2) NET program participants,

(3) TENN Competency Workshop staff, and

(4) state assessment instruments developed at UTK during FY 80.

This chapter includes information obtained from the State NET Staff concerning: (1) Youth Advisory Councils, (2) the USDA requirement for student involvement, and (3) verification of contract negotiations. Data collected from NET program participants are presented in Chapters 2-8. Information about the TENN Competency Workshops appears in Chapter 9. Analyses of data derived from state assessment instruments are included in Chapters 10-12.

Youth Advisory Councils

The State NET Coordinator was asked to keep a log of NET presentations during FY 81 in which a description of Youth Advisory Councils (YACs) was included. YACs were described either by Ms. Helen Minns or by Ms. Charlotte Pearson in seven NET presentations across the State. Usually these presentations were components of larger nutrition education workshops (i.e., teacher and food service personnel in-service training sessions; NETSW Follow-Up Sessions; the Tennessee Association of School Business Officials Conference); often selected slides depicting YAC activities were shown during the presentation. Ninety-one teachers, 98 food service managers, 2 administrators, 15 "others" attended these presentations.

USDA Requirement for Student Involvement

The State Project Coordinator also was asked to keep a log of NET presentations in which student involvement as part of the USDA requirement in the Child Nutrition Program was described. During FY 81 student involvement was described six times at meetings throughout the State. Four presentations describing student involvement were given at the NET-sponsored Residential Child Care Institution (RCCI) Workshops; one presentation was delivered at the Teacher In-Service Upper East Tennessee Education (U.E.T.E.) Conference, and one was given at a parenting conference sponsored by the State Department of Education. Of the 67 RCCI workshop participants, 25 were teachers, 29 were food service personnel, 8 were administrators, and 5 were "others." Fourteen of the participants in the Teacher In-Service U.E.T.E. Conference were teachers, one was an administrator. Two parents and one administrator attended the parenting conference.

Verification of Contract Negotiations

The State Project Coordinator provided the following information concerning the status of certain contract negotiations:

- The contract for extension of training based on elementary competencies developed at UTK during FY 80 was negotiated.
- Expansion Grants for 1980 NETSW schools were awarded.
- The contract for the development of a curriculum manual and workshop design based on nutrition competencies was modified to include Grades 7-9 instead of Grades 7-12. This modified contract was negotiated.
- The contract for development of three 30-minute television programs to provide nutrition information for adults was cancelled due to lack of funds.
- The contract for development of two teaching modules relating nutrition education to Tennessee history was extended. Modules were to be completed by September 1981.

Summary

During 1980-81 206 people were present for NET presentations in which a description of Youth Advisory Councils (YACs) was included. Eighty-five persons attended NET presentations in which a description was given of student involvement as part of the USDA requirement in the Child Nutrition Program. Four of the five contracts proposed in the 1980 State NET Plan were negotiated by the State NET Staff; one contract had to be cancelled due to a lack of funds.

CHAPTER 3

PARTICIPANT DATA COLLECTED DURING THE 1980 NUTRITION EDUCATION AND TRAINING SUMMER WORKSHOPS

Introduction

In 1979 nine regional NET Summer Workshops (NETSW) were conducted by the State NET Staff. Participants included a teacher and a food service manager from each of 115 schools. Five sets of data were collected from participants at these workshops. The data sets included:

1. participants' backgrounds in nutrition,
2. pre- and post-workshop scores on a test of knowledge of nutrition principles,
3. an assessment of the personal effectiveness of workshop facilitators,
4. participants' reactions to the goals and operation of the workshop as measured by the instrument "Overall Workshop Reaction," and,
5. participants' reactions to the workshop as measured by the instrument "Reaction to Overall Project."

In 1980 four regional workshops were conducted, with 51 teacher-food service manager teams taking part. Information in the same five areas also was gathered during the 1980 NET Summer Workshops. However, instead of using several different instruments as was done during the 1979 NETSW, one questionnaire (see Appendix A) was developed to:

(1) obtain information concerning participants' positions and years of service in that position, educational level, and background in nutrition education (1980 NETSW Information Sheet) and

(2) assess participants' reactions to
    (a) the goals and operation of the workshop;
    (b) the personal effectiveness of workshop facilitators; and
    (c) the effectiveness of the workshop in general.
    (1980 NETSW Evaluation Form)

The same pre- and post-tests administered during the 1979 workshops were used to assess changes in nutrition knowledge during 1980 NET Summer Workshops. Data from the questionnaire and the tests of nutrition knowledge were analyzed and interpreted in order to answer the following summative evaluation questions:

- How did NETSW-80 participants perceive the effectiveness of the workshop they attended?
- How effective was NETSW-80 in promoting participant learning of nutrition education concepts?

1980 NETSW Information Sheet

Participants' Position and Number of Years in Position

Of the 102 participants in the 1980 NET Summer workshops, 50 were teachers, 46 were food service managers, and 6 were either assistant food service managers or assistant principals. In general, teachers had served longer in their positions than had the food service managers. Fifty percent of the teachers had held their positions 10 years or more; of the food service managers, only 17% had served in their position 10 years or longer (Teachers: X = 12.48; S. D. = 9.52; Food Service Managers: X = 5.58; S. D. = 4.74).

Participants' Educational Level

As indicated by the data presented in Table 3.1, levels of education for NETSW participants ranged from below 8th grade to master's degrees. Sixty-five percent of the food service managers reported that their highest level of education was a high school diploma or a high school equivalency diploma. Eleven percent had completed 1, 2, or 3 years of college. Sixty-two percent of the teachers said they had earned bachelor's degrees; 36 percent had earned master's degrees. The number of graduate credit hours obtained by the teachers ranged from 3 to 90 (X = 32.03; S. D. = 25.86). Special certification earned included the following: Principal and Supervisor K-8 Certification; Special Education Certification; and School Food Service Management Certification.

Table 3.1: Highest Level of Education Completed by NETSW Teachers and Food Service Personnel (Frequencies)

Education	Teachers	FSP	Total
Below 8th grade	0	1	1
8th grade	0	5	5
9th grade	0	1	1
10th grade	0	1	1
11th grade	0	3	3
High School or equivalency diploma	0	30	30
One year college	0	3	3
Two years college	0	1	1
Three years college	0	1	1
Four years college	1	0	1
Bachelor's Degree	31	0	31
Master's Degree	18	0	18

Participants' Background in Nutrition Education

Background information gathered initially from NETSW-80 participants included the extent of previous training and experience in nutrition education. The responses indicated that 65% of the teachers and 73% of the food service managers had not had coursework in nutrition education. Of the respondents who had taken a course in nutrition education, 53% of the teachers and 91% of the food service managers had done so within the last decade. However, there were listings of coursework dating back to 1954.

Ninety-two percent of the teachers and 62% of the food service managers said they had never attended a workshop (1-5 days) in nutrition education. Of the respondents who said they had attended a nutrition education workshop, 75% of the teachers and 73% of the food service personnel had done so within the past 3 years (1978-1980). One-quarter of the teachers had had this experience prior to 1974; seven percent of the food service managers had attended a nutrition education workshop in 1977 while 20% had had this experience prior to 1974. Fifty-four percent of the teachers and 90% of the food service managers said they had not taught or taken part in nutrition education instruction. Respondents who said they had taught or taken part in nutrition education listed the following examples of their involvement:

- Health Classes
- Classroom units
- "Food: Your Choice" Levels K, 1-2
- "Basic Four" food groups
- School students and cafeteria personnel (FSP)
- Helped with nutrition workshops
- Home Economics class during student teaching
- Health department home visits
- College level health and nutrition
- Making and choosing nutritious snacks
- Menu planning and value of nutrients

1980 NETSW Evaluation Form

Participants' Reactions to the Goals and Operation of the Workshop

A series of questions on the 1980 NETSW Evaluation Form was designed to assess participants' reactions to the goals and operation of the workshops. Several variables considered important in defining the effectiveness of workshop goals and operation are organizational in nature: for example, goals of the meeting, participation in the meeting, decisions made during the meeting, and organization of the meeting. Other variables important in assessing participants' reactions to the goals and operation of the workshop are interactional and instructional in nature (i.e., relationship among participants; presentation of interpersonal skills/communication; presentation of interpersonal skills/team building; and presentation of instructional skills); others are affective (i.e., your feeling during the meeting and attitude about the meeting). These organizational, interactional/instructional, and affective variables provided the basis for items dealing with the goals and operation of the workshop on the 1980 NETSW Evaluation Form. Data from these individual response categories are presented and discussed below:

Goals of the Meeting. Seventy-seven percent of all participants attending the various workshops marked a "4" or "5" on the rating scale for this item. A "5" on the scale indicated that goals of the meeting were clear, shared by all, endorsed with enthusiasm.

Code Numbers for Workshops:

#1 = Memphis

#2 = MTSU Murfreesboro

#3 = ETSU Johnson City

#4 = UT Knoxville

Directions: Answer the items in accordance with your own opinions about the five-day workshop. There are no right answers. Circle the number on the scale that corresponds to your opinion.

6. Goals of the meeting

Poor: 1 2 3 4 5 Good:
(unclear; diverse; conflicting; unacceptable)
(clear; shared by all; endorsed with enthusiasm)

	BY WORKSHOP				BY CAREER		TOTAL
	#1	#2	#3	#4	Teachers	FSP	All Respondents
Poor = 1	4%		4%		2%		1%
2		5%		4%	4%		2%
3	21%	20%	8%	29%	22%	19%	20%
4	43%	35%	38%	25%	40%	35%	38%
Good = 5	32%	40%	46%	37%	32%	47%	39%
# of responses	28	20	26	27	50	43	101

Workshop	Mean	Std. Dev.
1	4.11	.75
2	4.10	.91
3	4.28	.94
4	4.04	.94

Participation in the Meeting. Of all participants in the various workshops, 89% rated this item as a "4" or "5", a "5" indicating that discussion is open and lively and "all get in" and "all are really listened to."

7. Participation in the meeting

Poor: 1 2 3 4 5 Good:
(few dominate; some passive; some not listened to; several talk at once or interrupt)
(all get in; all are really listened to; open and lively discussion)

	BY WORKSHOP				BY CAREER		TOTAL
	#1	#2	#3	#4	Teachers	FSP	All Respondents
Poor = 1	4%				2%		1%
2	4%	5%			2%	2%	2%
3	7%	10%		14%	6%	11%	8%
4	29%	20%	21%	43%	32%	32%	31%
Good = 5	59%	65%	73%	36%	58%	55%	58%
# of responses	28	20	26	26	50	44	100

Workshop	Mean	Std. Dev.
1	4.32	1.02
2	4.45	.89
3	4.73	.45
4	4.23	.71

Decisions Made During the Meeting. Eighty-nine percent of all workshop participants rated "decisions made during the meeting" as a "4" or "5"; a "5" indicates that good decisions were made; everyone felt a part of the decision-making process; and people felt committed to the decision.

8. Decisions made during the meeting

Poor: 1 2 3 4 5 Good:
(no decisions were made;
decisions were made to which
I feel uncommitted; bad
decisions were made)

(good decisions were
made; everyone felt a
part of the decision-
making process; people
feel committed to the
decision)

	BY WORKSHOP				BY CAREER		TOTAL
	#1	#2	#3	#4	Teachers	FSP	All Respondents
Poor = 1							
2	7%	5%			4%	2%	3%
3	14%			14%	12%	5%	8%
4	25%	50%	27%	32%	36%	32%	33%
Good = 5	54%	45%	73%	46%	48%	61%	56%
# of responses	28	20	26	26			100

Workshop	Mean	Std. Dev.
1	4.25	.96
2	4.35	.75
3	4.73	.45
4	4.34	.74

Your Feeling During the Meeting. Eighty-six percent of all workshop participants also rated this item as "4" or "5", a "5" indicating that feelings were freely expressed and participants "felt understood" and "felt support" from other participants.

9. Your feeling during the meeting

Poor: 1 2 3 4 5 Good:

(I was unable to express my feelings; my feelings were ignored; my feelings were criticized)

(I freely expressed my feelings; I felt understood; I felt support from the participants)

	BY WORKSHOP				BY CAREER		TOTAL
	#1	#2	#3	#4	Teachers	FSP	All Respondents
Poor = 1							
2				4%		2%	1%
3	11%		19%	18%	12%	14%	13%
4	29%	40%	12%	28%	28%	25%	25%
Good = 5	60%	60%	69%	50%	60%	59%	61%
# of responses	28	20	26	26	50	44	100

Workshop	Mean	Std. Dev.
1	4.50	.69
2	4.60	.50
3	4.50	.81
4	4.27	.92

Organization of the Meeting. Eighty percent of the workshop participants rated this item "4" or "5", a "5" indicating that the meeting was well organized; it was flexible enough that participants were able to influence it; generally, all went smoothly.

10. Organization of the meeting

Poor: 1 2 3 4 5 Good:

(It was chaotic, it was too tightly controlled; very poorly done; I felt manipulated)

(It was very well organized; it was flexible enough so we were able to influence it; all went smoothly)

	BY WORKSHOP				BY CAREER		TOTAL
	#1	#2	#3	#4	Teachers	FSP	All Respondents
Poor = 1				4%	2%		1%
2	14%		4%		6%	4%	5%
3	21%	10%	8%	18%	14%	16%	15%
4	29%	45%	35%	29%	40%	27%	34%
Good = 5	36%	45%	54%	46%	38%	53%	46%
# of responses	28	20	26	27	50	45	101

Workshop	Mean	Std. Dev.
1	3.86	1.08
2	4.35	.67
3	4.38	.80
4	4.19	1.00

Relationship Among Meeting Participants. Responses of participants attending the various workshops to this item were overwhelmingly positive (i.e., 96% of the respondents marked a "4" or "5" on the rating scale). A "5" on the rating scale indicates that "our relationship is much improved; I trust them more than I did prior to the session; I feel I got to know them better; there is good potential for the future."

11. Relationship among meeting participants

Poor: 1 2 3 4 5 Good:

(My relationship with them is the same as before; I feel antagonistic towards many of them; I don't trust them; there is little potential for a future relationship)

(Our relationship is much improved; I trust them more than I did prior to the session; I feel I got to know them better; there is good potential for the future)

	BY WORKSHOP				BY CAREER		TOTAL
	#1	#2	#3	#4	Teachers	FSP	All Respondents
Poor = 1							
2							
3		10%		7%	8%		4%
4	18%	10%	19%	18%	14%	20%	17%
Good = 5	82%	80%	81%	68%	78%	80%	79%
# of responses	28	20	26	26	50	44	100

Workshop	Mean	Std. Dev.
1	4.82	.39
2	4.70	.66
3	4.81	.40
4	4.65	.63

Attitude about the Meeting. Eighty-five percent of all workshop participants rated their attitude about the meeting as "4" or "5"; a "5" indicating that they liked the meeting and considered it interesting and helpful.

12. Attitude about the meeting

Poor: 1 2 3 4 5 Good:
(boring; it was a waste of time; I don't like the way it was presented; disliked it)
(interesting; was helpful; liked it)

	BY WORKSHOP				BY CAREER		TOTAL
	#1	#2	#3	#4	Teachers	FSP	All Respondents
Poor = 1				4%	2%		1%
2				4%		2%	1%
3	18%		4%	25%	10%	16%	13%
4	32%	20%	38%	25%	40%	23%	30%
Good = 5	50%	80%	58%	32%	48%	58%	55%
# of responses	28	20	26	26	50	43	99

Workshop	Mean	Std. Dev.
1	4.32	.77
2	4.80	.41
3	4.54	.58
4	3.88	1.09

Presentation of Interpersonal Skills/Communication. Seventy-six percent of participants attending the various workshops rated this item positively (i.e., marked "4" or "5" on the rating scale). A "5" indicates that the presentation was informative, that the participants had learned a lot from it and would be able to use the exercises and materials.

13. Presentation of Interpersonal Skills/Communication

Poor: 1 2 3 4 5 Good:
(uninstructional; did not learn much; not informative; too many exercises; too much processing; not enough content)
(learned a lot; was informative; I'll be able to use exercises and materials)

	BY WORKSHOP				BY CAREER		TOTAL
	#1	#2	#3	#4	Teachers	FSP	All Respondents
Poor = 1		10%	7%	4%	8%	2%	5%
2		5%	7%	7%	8%	2%	5%
3	4%	10%	4%	32%	16%	10%	13%
4	50%	15%	19%	25%	29%	33%	30%
Good = 5	46%	50%	62%	21%	39%	52%	46%
# of responses	28	18	26	25	49	42	97

Workshop	Mean	Std. Dev.
1	4.42	2.57
2	4.00	1.41
3	4.19	1.30
4	3.60	1.08

Presentation of Interpersonal Skills/Team Building. Eighty percent of all workshop participants rated this item a "4" or "5" on the rating scale. A "5" indicates that the participant felt the activity was informative, learned a lot from it, and would use exercises and materials presented.

14. Presentation of Interpersonal Skills/Team Building

Poor: 1 2 3 4 5 Good:
(uninstructional; did not learn much, not informative; too many exercises; too much processing; not enough content)
(learned a lot; was informative; I'll be able to use exercises and materials)

	BY WORKSHOP				BY CAREER		TOTAL
	#1	#2	#3	#4	Teachers	FSP	All Respondents
Poor = 1		10%	8%	4%	8%	2%	5%
2		5%	8%	9%	8%	2%	5%
3	7%	10%	4%	14%	6%	14%	9%
4	46%	25%	19%	36%	44%	21%	33%
Good = 5	46%	5%	62%	29%	34%	60%	47%
# of responses	28	20	26	25	50	43	99

Workshop	Mean	Std. Dev.
1	4.39	.62
2	4.00	1.34
3	4.19	1.30
4	3.88	1.09

Presentation of Instructional Skills. Eighty-eight percent of participants attending the various workshops rated this item positively (i.e., marked "4" or "5" on the rating scale). A "5" on the scale indicates that the presentation was informative, that the participant learned a lot and would be able to use the exercises and materials presented.

15. Presentation of Instructional Skills

Poor: 1 2 3 4 5 Good:
(uninstructional; did not learn much, not informative; too many exercises; too much processing; not enough content)
(learned a lot; was informative; I'll be able to use exercises and materials)

	BY WORKSHOP				BY CAREER		TOTAL
	#1	#2	#3	#4	Teachers	FSP	All Respondents
Poor = 1							
2				11%	4%	2%	3%
3	4%	5%	4%	21%	8%	9%	9%
4	29%	35%	34%	21%	35%	26%	31%
Good = 5	68%	60%	62%	32%	53%	63%	57%
# of responses	28	20	26	24	49	43	98

Workshop	Mean	Std. Dev.
1	4.64	.55
2	4.55	.60
3	4.58	.58
4	3.88	1.08

Conclusions:

Participants' reactions to the goals and operation of the workshop were largely positive. In all cases at least 76% of the respondents rated items "4" or "5" on a scale of "1" to "5" (Poor: 1 2 3 4 5 Good:). The area of greatest strength (i.e., the item receiving the highest mean responses) was the "relationship among workshop participants." Items dealing with interpersonal skills/communication; interpersonal skills/team building; goals of the meeting; and organization of the meeting received the lowest mean responses.

Participants' Reactions to the Personal Effectiveness of Workshop Facilitators

A series of questions on the 1980 NETSW Evaluation Form was designed to assess participants' reactions to the personal effectiveness of workshop facilitators. A goal of the 1980, as well as the 1979, NETSW Program was to provide participants with training in nutrition and the teaching of nutrition. A second goal considered equally important was to help each pair of participants from individual schools become a working team. In addition to the presentation of nutrition-related information, the team development goal required the workshop facilitator to initiate and interact in activities developed to establish and/or enhance communication between the team members. Therefore, the assessment of facilitators' effectiveness in promoting interaction and communication among participants and between team members was considered an important aspect of the 1980 NETSW evaluation. Several variables, namely, leaders' respect for peoples' feelings; leaders' desire to help participants; clearness of leaders' instructions; leaders' knowledge of nutrition education; and leaders' familiarity with materials presented, were selected as indicators of leaders' effectiveness. These variables provided the basis for the items dealing with leader effectiveness on the 1980 NETSW Evaluation Form. Data from these individual response categories are presented and discussed below:

Leaders' Respect for Peoples' Feelings. Responses of participants attending the various workshops to this item were overwhelmingly positive (i.e., more than 91% of all respondents marked a "4" or a "5" on the rating scale).

16. Leaders' respect for peoples' feelings

Poor: 1 2 3 4 5 Good:
(not sensitive to feelings of individuals; intolerant of others; critical)
(considerate of others' feelings; non-judgmental; supportive)

	BY WORKSHOP				BY CAREER		TOTAL
	#1	#2	#3	#4	Teachers	FSP	All Respondents
Poor = 1	4%				2%		1%
2	4%	5%		7%	2%	7%	4%
3	4%	10%	4%		4%	5%	4%
4	39%	15%	15%	21%	27%	24%	25%
Good = 5	46%	70%	77%	61%	65%	64%	66%
# of responses	27	20	25	25	49	42	97

Workshop	Mean	Std. Dev.
1	4.26	.98
2	4.50	.88
3	4.76	.52
4	4.52	.87

Leaders' Desire to Help Participants. Participants' reactions to this item also were overwhelmingly positive. More than 94% of the respondents marked "4" or "5" on the hedonic scale. None of the participants rated leaders' desire to help participants below a "3".

17. Leaders' desire to help participants

Poor: 1 2 3 4 5 Good:
(not helpful at all; participants were on their own; not open to questions)
(very helpful; involved in making sure participants were on right track; encouraged questions)

	BY WORKSHOP				BY CAREER		TOTAL
	#1	#2	#3	#4	Teachers	FSP	All Respondents
Poor = 1							
2							
3	11%	10%		4%	4%	10%	6%
4	29%	30%	12%	11%	28%	14%	20%
Good = 5	61%	60%	85%	75%	68%	76%	74%
# of responses	28	20	25	25	50	42	98

Workshop	Mean	Std. Dev.
1	4.50	.69
2	4.50	.69
3	4.88	.33
4	4.80	.50

Clearness of Leaders' Instructions. Seventy-seven percent of all the respondents rated leaders "4" or above on this category. Only 1% of the participants said they considered leaders' ability to give clear instructions to be "poor."

18. Clearness of leaders' instructions

Poor: 1 2 3 4 5 Good:
(spent little time trying to dispel confusion; did not seem to know what should be done, so explanations were vague; unexpected problems seemed to arise frequently; explanations were confusing and meandering)
(explained confusing things completely and thoroughly; knew what was to be done and how to do it; anticipated problems; explanations were clear and concise)

	BY WORKSHOP				BY CAREER		TOTAL
	#1	#2	#3	#4	Teachers	FSP	All Respondents
Poor = 1	4%				2%		1%
2	7%	5%		7%	8%	2%	5%
3	18%	20%	19%	7%	14%	21%	16%
4	36%	30%	23%	36%	42%	19%	33%
Good = 5	32%	45%	50%	43%	34%	57%	44%
# of responses	27	20	24	26	50	42	97

Workshop	Mean	Std. Dev.
1	3.89	1.09
2	4.15	.93
3	4.33	.81
4	4.23	.91

Leaders' Knowledge of Nutrition Education. At least 90% of the participants at each of the 4 workshops, 97% altogether, rated their leaders' knowledge of nutrition education as being a "4" or a "5". None of the respondents rated this category below a "3".

19. Leaders' knowledge of nutrition education

Poor: 1 2 3 4 5 Good:
(not knowledgeable; uncertain;
did not respond to questions
about nutrition with authority)
(very knowledgeable; competent; addressed questions about nutrition with confidence)

	BY WORKSHOP				BY CAREER		TOTAL
	#1	#2	#3	#4	Teachers	FSP	All Respondents
Poor = 1							
2							
3	7%	5%			4%	2%	3%
4	25%	5%		4%	10%	10%	9%
Good = 5	68%	90%	92%	86%	86%	88%	88%
# of responses	28	20	24	25	50	42	97

Workshop	Mean	Std. Dev.
1	4.61	.63
2	4.85	.49
3	5.00	.00
4	4.96	.20

Leaders' Familiarity with Materials Presented. Ninety-seven percent of all workshop participants marked "4" or "5" on the rating scale for this item; twelve percent marked "3". None of the respondents rated leaders' familiarity with materials presented lower than a "3".

20. Leaders' familiarity with materials presented

Poor: 1 2 3 4 5 Good:
(unfamiliar with materials;
suggestions for uses of
materials were inadequate)
(knew materials very well;
offered good suggestions
for using materials)

	BY WORKSHOP				BY CAREER		TOTAL
	#1	#2	#3	#4	Teachers	FSP	All Respondents
Poor = 1							
2							
3	7%	5%			2%	5%	3%
4	25%	5%	8%	4%	10%	14%	11%
Good = 5	68%	90%	91%	96%	88%	81%	86%
# of responses	28	20	24	25	50	42	97

Workshop	Mean	Std. Dev.
1	4.61	.63
2	4.85	.49
3	4.91	.28
4	4.96	.20

Conclusion. In general 1980 NETSW participants reacted very positively to the personal effectiveness of their facilitators. "Leaders' knowledge of nutrition education" and "leaders' familiarity with materials presented" received the highest mean responses. "Clearness of leaders' instructions" received the lowest mean response.

Participants' Reactions to the Effectiveness of the Workshop in General

Data collected through the 1980 NETSW Evaluation Form to determine participants' reactions to the effectiveness of the workshop in general consisted of three different types of information:

1) Responses to open-ended questions designed to permit participants to identify positive and negative aspects of the workshop experience

2) Responses to a question entitled "over-all productivity of the meeting"

3) An artificial "success" variable created by summing the means of questions dealing with participants' reactions to the goals and operation of the workshop and the personal effectiveness of workshop facilitators on the 1980 NETSW Evaluation Form to determine if there were differences in reactions to the over-all effectiveness of individual workshops.

Each of these different types of data are presented and discussed below:

Participants' Responses to Open-ended Questions. In general responses to open-ended questions on the 1980 NETSW Evaluation Form were overwhelmingly positive. Ninety-nine percent of the participants indicated that at least something of value had happened to them during the workshop; 71% said quite a lot of value had happened to them. When asked if any particular idea or happening stood out in their minds, most respondents said the nutrition content presented, increased awareness of the importance of nutrition, and the importance of teamwork.

Not more than 11% of all the participants indicated that they felt something in the meeting was of no value to them. Most of the respondents who indicated that a particular happening or idea stood out in their minds as being worthless said they thought too much time was spent on teamwork and interpersonal skills; not enough emphasis was placed on nutrition content.

When participants were asked if there was any feature about the way the workshop operated that they thought particularly effective, most of them said the openness and informality of the meetings and the opportunity to share ideas and information. When asked if there was any feature about the way the group operated that they thought particularly ineffective, most respondents seemed to think there was some disorganization, lack of communication about the goals for the workshop, and too much time spent on lectures.

Directions: Place a check ( ) in the blank beside those statements that best describe your opinion and write in comments if appropriate.

1. Do you feel that anything of value happened to you during this meeting?

___(1) Yes, quite a lot
___(2) Yes, something
___(3) Not Much
___(4) Nothing

	BY WORKSHOP				BY CAREER		TOTAL
	#1	#2	#3	#4	Teachers	FSP	All Respondents
Yes, quite a lot	71%	70%	81%	61%	74%	65%	71%
Yes, something	29%	30%	19%	36%	24%	35%	28%
Not much				4%	2%		1%
Nothing							
# of responses	28	20	26	28	50	46	102

Workshop	Mean	Std. Dev.
1	1.29	.46
2	1.30	.47
3	1.19	.40
4	1.42	.57

2. If you found something of value in this meeting, does any particular happening or idea stand out in your mind?

___(1) Nothing of value happened.
___(2) It was a valuable meeting, but no particular thing stands out.
___(3) Yes, something does stand out for me, namely:

____

____

	BY WORKSHOP				BY CAREER		TOTAL
	#1	#2	#3	#4	Teachers	FSP	All Respondents
Nothing of value happened	14%	5%		4%	2%	2%	2%
It was a valuable meeting, but no particular thing stands out	14%	35%	35%	7%	15%	45%	30%
Yes, something does stand out for me, namely:	71%	60%	65%	32%	83%	52%	68%
# of responses	24	19	26	27	47	44	96

Workshop	Mean	Std. Dev.
1	2.83	.38
2	2.63	.50
3	2.65	.49
4	2.51	.64

Workshop #1 = Memphis

- . 13 Respondents said nutrition content presentations
- . 2 Respondents said the importance of teamwork
- . 2 Respondents said the sharing of BHAPs
- . 1 Respondent said stating feelings clearly and openly
- . 1 Respondent said "activities"
- . 1 Respondent said "Broken square", introduction to nutrition center, and lectures
- . 1 Respondent said "Johari's window"
- . 1 Respondent said "fishbowl discussions"

Workshop #2 = MTSU Murfreesboro

- . 6 Respondents said nutrition content
- . 1 Respondent said current issues in nutrition
- . 1 Respondent said "the importance of nutrition"
- . 2 Respondents said nutrition information sources
- . 1 Respondent said ideas concerning using cafeterias as learning labs
- . 1 Respondent said "BHAP"
- . 1 Respondent said "relating to people and sharing ideas"
- . 1 Respondent said "activities"
- . 1 Respondent said "materials"

Workshop #3 = ETSU Johnson City

- . 3 Respondents said nutrition content
- . 3 Respondents said relating to people and sharing ideas
- . 2 Respondents said the motivation to teach nutrition
- . 2 Respondents said the emphasis on problem-solving
- . 2 Respondents said materials available
- . 2 Respondents said "games"
- . 2 Respondents said "BHAP"
- . 1 Respondent said "activities"
- . 1 Respondent said teamwork

Workshop #4 = UT Knoxville

- . 5 Respondents said relating to people and sharing ideas
- . 3 Respondents said working as a team
- . 5 Respondents said increased awareness of the importance of nutrition
- . 1 Respondent said the importance of implementing funds for nutrition education
- . 1 Respondent said "interpersonal relationships and activities"

3. If you found something in this meeting to be of no value, was there a particular happening or idea that stands out in your mind as being worthless?

___(1) Most everything was of some value.
___(2) Some parts of the meeting have no value, but no particular thing stands out.
___(3) Yes, something stands out for me as worthless (having no value), namely:

	BY WORKSHOP				BY CAREER		TOTAL
	#1	#2	#3	#4	Teachers	FSP	All Respondents
Most everything was of some value	75%	80%	73%	61%	59%	87%	74%
Some parts of the meeting have no value, but no particular thing stands out	18%	5%	8%	25%	22%	9%	15%
Yes, something stands out for me as worthless	7%	15%	12%	11%	18%	2%	11%
# of responses	28	20	24	27	49	44	99

Workshop	Mean	Std. Dev.
1	1.32	.61
2	1.35	.75
3	1.33	.70
4	1.48	.70

Workshop #1

. 1 Respondent said "class members' presentations of text material"

. 1 Respondent said "meetings getting underway past time" and "time lost in looking in unfamiliar books"

Workshop #2

. 1 Respondent said "too much emphasis on interpersonal interactions, too little nutrition content"

. 1 Respondent said "too much emphasis on interpersonal skills and questions were too personal for a working relationship"

Workshop #3

. 3 Respondents said interpersonal communications and games

Workshop #4

. 2 Respondents said too much time spent on teamwork. More time needed to be spent on nutrition content

. 1 Respondent said too much time spent on interpersonal skills

. 1 Respondent said "the nutrition lectures over books which we hadn't had time to read or study"

4. Was there any feature about the way this group operated that you thought particularly effective?

___(1) No

___(2) Yes, namely:

	BY WORKSHOP				BY CAREER		TOTAL
	#1	#2	#3	#4	Teachers	FSP	All Respondents
No	32%	30%	12%	32%	20%	33%	26%
Yes, namely:	68%	70%	88%	68%	80%	67%	74%
# of responses	28	20	26	28	50	46	102

Workshop	Mean	Std. Dev.
1	1.67	.48
2	1.70	.47
3	1.88	.33
4	1.68	.48

Workshop #1

- 3 Respondents said the emphasis on teamwork
- 1 Respondent said the "attempt to teach communication skills with plans to teach nutrition"

Workshop #2

- 2 Respondents said "fish bowl" discussions
- 2 Respondents said having a variety of speakers
- 1 Respondent said discussion of controversies in nutrition
- 2 Respondents said group cooperation, the openness of communication and the exchange of ideas

Workshop #3

- 10 Respondents said the "fishbowl" discussions
- 5 Respondents said the informality and openness of the meetings
- 4 Respondents said sharing ideas
- 1 Respondent said "BHAP"
- 1 Respondent said the interest of the participants
- 1 Respondent said having a variety of speakers

Workshop #4

- 8 Respondents said sharing ideas and information
- 7 Respondents said the informal, open, non-threatening atmosphere of the meetings
- 4 Respondents said teamwork
- 1 Respondent said the enthusiasm of the group
- 1 Respondent said "the instructor"

5. Was there any feature about the way this group operated that you thought particularly ineffective?

___(1) No

___(2) Yes, namely:

	BY WORKSHOP				BY CAREER		TOTAL
	#1	#2	#3	#4	Teachers	FSP	All Respondents
No	75%	85%	85%	61%	73%	83%	77%
Yes, namely:	18%	15%	15%	39%	27%	17%	23%
# of responses	26	20	26	28	48	46	100

Workshop	Mean	Std. Dev.
1	1.19	.40
2	1.50	.37
3	1.53	.37
4	1.39	.50

Workshop #1

- 3 Respondents said disorganized and conflicting statements from the leaders. "Lack of clarification on immediate goals"
- 2 Respondents said "too much lecture"; "too much output, too little input"
- 1 Respondent said directions were not clear
- 1 Respondent said "The presentations of the chapters read were given during the last hour of the day and many were simply read from exact copies of the book"

Workshop #2

- 1 Respondent said "not being punctual"
- 1 Respondent said "too much talk about irrelevant matters"
- 1 Respondent said the "work dialog between teacher and food service manager"

Workshop #3

- 1 Respondent said "people trying to work on their own before proper directions and instruction was given caused confusion"

Workshop #4

- 1 Respondent said "the group was a little too controlled at times"
- 1 Respondent said "too much time on interpersonal communications"
- 1 Respondent said "the test in March"
- 1 Respondent said "disorganized"
- 1 Respondent said "irrelevant information"
- 1 Respondent said "too little group discussion"
- 1 Respondent said "nutrition content lectures too long"
- 1 Respondent said "days were too long--readings had to be done at home"

Participants' Reactions to the Over-all Productivity of the Workshop. Ninety-four percent of all participants in the workshops rated the over-all productivity of these workshops "4" or "5". Only 1% of the participants in all workshops rated the over-all productivity of the meetings below "3".

21. Over-all productivity of the meeting

Poor: 1 2 3 4 5 Good:
(didn't accomplish much; no useful ideas emerged; it got us nowhere)
(got a lot done; very fruitful; something will come of this session)

	BY WORKSHOP				BY CAREER		TOTAL
	#1	#2	#3	#4	Teachers	FSP	All Respondents
Poor = 1							
2				4%	2%		1%
3	11%		4%	4%	4%	7%	5%
4	29%	15%	4%	32%	26%	17%	22%
Good = 5	61%	85%	86%	50%	68%	76%	72%
# of responses	28	20	24	25	50	42	97

Workshop	Mean	Std. Dev.
1	4.50	.69
2	4.85	.37
3	4.88	.45
4	4.44	.77

Participants' Over-all Reactions to Goals and Operation of the Workshop, and the Personal Effectiveness of Workshop Facilitators

An artificial "success" variable was created by summing the means of questions dealing with participants' reactions to the goals and operation of the workshop and the personal effectiveness of workshop facilitators. There were no differences in reactions to the over-all effectiveness of individual workshops. This data is summarized below:

Workshop	Mean
#1 (Memphis)	4.4
#2 (MTSU)	4.5
#3 (ETSU)	4.6
#4 (UTK)	4.3

Differences in mean scores between workshops are not significant ($F=1.41$; $p<.05$).

Comparison of Pre- and Post-Workshop Performance on a Test of Nutrition Knowledge

Tables 3.2 and 3.3 contain information about NETSW participants' knowledge of nutrition as measured by a test given near the beginning of the workshop and again near the end. Means and standard deviations are given for pre-test, post-test, and gain scores (post-test score minus pre-test score) for each workshop individually and for all workshops grouped together. These data should be examined with care for the following reasons:

1) Although the teachers' scores were higher than the corresponding scores for the food service managers, it should be noted that the nutrition test given during the workshop was a verbal instrument and that the educational level of the teachers was markedly higher than that of the food service managers. At the very least, teachers had had more experience with taking tests. The gain score may provide a more legitimate comparison, although even these scores are biased to some extent (although to a lesser degree) in favor of those with higher levels of education.

2) Another reason for caution is the wider variation in scores for the food service managers than for the teachers. This greater degree of heterogeneity among food service manager scores indicates that their reported means include more extreme scores (either high or low) than do means reported for teachers. This implies that the mean score for the teachers is a better "average" score than is the mean score for the food service managers.

3) A third consideration in examining the test data is the fact that the post-test was administered within the same week as the pre-test, using the same instrument. Practice in taking the test alone can explain some increase in the post-test scores.

4) Finally, the user of this information should consider the instructional cues, both overt and covert, given to workshop participants to encourage them to acquire the nutrition content. How consistent were learning activities and learning cues across workshops? There is some indication from the open-ended responses that there were differences in the amount of nutrition content material presented. For example, some workshop participants said they felt too much time was spent in lectures on nutrition content; others said too much time was spent on interpersonal

> skills and not enough in covering nutrition content material. Respondents from various workshops rated facilitator effectiveness differently. Variables such as leaders' respect for peoples' feelings; leaders' desire to help participants; clearness of leaders; instructions are very definitely related to covert instructional cues.

Despite these cautions, some conclusions can be drawn from the data: For each workshop there was a significant increase in the total (i.e., teachers and FSP scores combined) mean post-test score on the test of nutrition knowledge when this is compared to the total mean pre-test score. Gain score (post-test minus pre-test score) was significant for teachers in each of the four workshops; gain score for food service managers also was significant in each workshop except Workshop #4 (UTK). There was no significant difference between gain scores for teachers and those for food service personnel across workshops. Furthermore, the interaction (position x workshop) was not significant. However, in all workshops there was a significant gain in post-test scores for all participants as compared to pre-test scores.

Table 3.2: 1980 NET Summer Workshops: Nutrition Knowledge Test Scores
(Score = Number Correct; Maximum Score = 100)

Workshop #1 (Memphis)

	Teachers	FSP	Total
No. Taking Both Tests	14	14	28
Pre-test Scores			
Mean	73.1	66.9	70
S.D.	9.2	16.2	13.3
Post-test Scores			
Mean	79.6	77.6	78.6
S.D.	11.1	14.6	12.8
t-value (post-test--pre-test)			4.32*

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*$p < .05$

Workshop #2 (MTSU)

	Teachers	FSP	Total
No. Taking Both Tests	10	10	20
Pre-test Scores			
Mean	90.9	82.5	86.7
S.D.	5.8	10.2	9.2
Post-test Scores			
Mean	94.8	88.3	91.6
S.D.	4.0	8.1	7.1
t-value (post-test--pre-test)			3.55*

---

*p $< .05$

Workshop #3 (ETSU)

	Teachers	FSP	Total
No. Taking Both Tests	13	12	25
Pre-test Scores			
Mean	89.7	84.6	87.2
S.D.	3.7	6.5	
Post-test Scores			
Mean	95.3	93.9	94.6
S.D.	3.8	3.7	3.7
t-value (post-test--pre-test)			9.4*

---

*p $< .05$

Workshop #4 (UTK)

	Teachers	FSP	Total
No. Taking Both Tests	14	14	28
Pre-test Scores			
Mean	88.4	85.3	86.8
S.D.	6.5	5.5	6.1
Post-test Scores			
Mean	95.3	89.1	92.2
S.D.	4.2	7.3	6.6
t-value (post-test--pre-test)			4.50*

---

*p $< .05$

Table 3.3: 1980 NET Summer Workshops: Mean Gains in Nutrition Knowledge Test Scores

Total Mean Gain by Workshop

Workshop	Mean Gain
#1 (Memphis)	8.6
#2 (MTSU)	4.9
#3 (ETSU)	7.4
#4 (UTK)	5.3

Differences in total mean gain scores between workshops are not significant ($F=1.466$; $p<.05$).

Mean Gain for Teachers by Workshop

Workshop	Mean Gain
#1 (Memphis)	6.4
#2 (MTSU)	3.9
#3 (ETSU)	5.6
#4 (UTK)	6.9

Differences in teacher mean gain scores between workshops are not significant ($F=.580$; $p<.05$).

Mean Gain for FSP by Workshop

Workshop	Mean Gain
#1 (Memphis)	10.7
#2 (MTSU)	5.8
#3 (ETSU)	9.3
#4 (UTK)	3.8

Differences in FSP mean gain scores between workshops are not significant ($F=1.918$; $p<.05$).

Summary

The NET evaluation team developed an instrument incorporating the 1980 NETSW Information Sheet and the 1980 NETSW Evaluation Form which was administered to participants in 1980 Summer Workshops (NETSW) in an attempt to obtain information in the following areas:

a) Participants' position and number of years in that position

b) Participants' educational level

c) Participants' background in nutrition education

d) Participants' reactions to the goals and operation of the workshop

e) Participants' reactions to the personal effectiveness of workshop facilitators

f) Participants' reactions to the effectiveness of the workshop in general

This instrument along with an assessment of NETSW participant nutrition knowledge was designed to provide data useful in answering the following evaluation questions:

1) How did NETSW-80 participants perceive the effectiveness of the workshop they attended?
2) How effective was NETSW-80 in promoting participant learning of nutrition education concepts?

More teachers than food service managers attended the 1980 NETSW workshops. Teachers had served longer in their positions than food service managers and had attained a higher level of education. A higher percentage of the teachers had had courses in nutrition education; however, their coursework was less recent than that of the food service managers. More food service managers than teachers had attended a workshop in nutrition education. Most of the food service managers and teachers had attended a nutrition education workshop within the past three years. A higher percentage of the teachers said they had taught or taken part in nutrition education instruction; most had taught nutrition in health classes or had integrated the subject into other classroom units.

Participants' reactions to the goals and operation of the workshop were largely positive. In all cases at least 76% of the respondents rated items "4" or "5" on a scale of "1" to "5" (Poor: 1 2 3 4 5 Good:). The area of greatest strength was the "relationship among workshop participants." Interpersonal skills/communication; interpersonal skills/team building; goals of the meeting; and organization of the meeting were areas of weakness.

Participants were overwhelmingly positive in their reactions to the personal effectiveness of workshop facilitators. In all cases over 77% of the respondents rated the categories "4" or "5" on a scale of "1" to "5" (Poor: 1 2 3 4 5 Good:). Areas of strength were "leaders' knowledge of nutrition education" and "leaders' familiarity with materials presented." "Clearness of leaders' instructions" was the area of greatest weakness.

Concerning participants' reactions to the effectiveness of the workshop in general, most of the respondents said "quite a lot" of value had happened to them during the workshop. Several participants mentioned the nutrition content presented; increased awareness of the importance of nutrition; and the emphasis on teamwork as the most valuable aspects of the meetings. Respondents also seemed to value the informality and openness of the meetings and the opportunity to share ideas and information. Criticisms of the workshops seemed to center on too little time spent on nutrition content; lack of communication and organization; and too much time spent on lectures. Ratings of the "over-all productivity" of the workshops were positive in nature. On an analysis of variance of mean responses for items reflecting participants' reactions to the goals and operation of the workshop and the personal effectiveness of workshop facilitators there were no signficant differences between workshops concerning the "success" of the meetings.

Although the reader has been cautioned in interpreting the results of the comparison of pre- and post-workshop performance on a test of nutrition knowledge, there is one conclusion that can be drawn from this data that attests to the effectiveness of NETSW-80 in promoting participation learning of nutrition education concepts. For each workshop there was a significant increase in the total (i.e., teacher and FSP scores combined) mean score on the test of nutrition knowledge when this was compared with the total mean pre-test score.

CHAPTER 4

FOLLOW-UP ASSESSMENT OF NUTRITION EDUCATION AND TRAINING SUMMER WORKSHOPS

Nutrition Education and Training Program Follow-Up Questionnaire for 1980 NETSW Participants

Dulcie Peccolo

A questionnaire was developed by the Nutrition Education and Training (NET) Project Evaluation team to evaluate two aspects of the 1980 NET Summer Workshops (NETSW): 1) to review the impact of the workshops and 2) to obtain progress reports on the implementation of workshop participants' Back Home Action Plans (BHAPs).

Input for the design of the questionnaire was received primarily from two sources. First, the director of the NETSW sessions provided suggestions on various components of the workshops which should be included in the evaluation. The questions related to the effectiveness of materials used in the workshop were developed in cooperation with the NETSW director. Secondly, the NETSW Follow-Up Questionnaire from the previous year provided some useful suggestions for the development of this year's evaluation instrument. Consequently, many of the items on this year's questionnaire had been validated through their use in the previous year. A sample of the 1980 NETSW questionnaire may be found in Appendix B.

A total of 77 individuals completed the Follow-Up Questionnaire which was administered at the Second NETSW Follow-Up Sessions held in Spring 1981. This figure represents 75% of the 102 (51 teams) individuals who actually took part in the NET Summer Workshops. Of the 77 respondents, 41 (53%) were teachers and 33 (43%) were food service managers. Three additional individuals completed the questionnaire who did not fit into the categories of teacher or food service manager. All four workshops were represented.

A summary of the findings derived from the questionnaire follows. Note throughout the tabular summary that percentages given are based on the number of individuals who responded to each item. As not all respondents checked a response for job classification, total numbers of responses by workshops will not always agree with total number of responses by career.

Questions 1 & 2: Workshop Location and Job Classification.

The questionnaire first sought some basic demographic information from the respondents. Questions related to location of workshop and job classification were asked to see if these variables had any bearing on responses to later questions related to the impact of the workshops and BHAP implementation. Table 4.1 provides a breakdown of respondents' job classification and workshop attendance.

Table 4.1

Workshop Participants Completing Follow-Up Questionnaire

Workshop Participants Completing Follow-Up Questionnaire	Teacher	Food Service Manager	Other	Total # of Responses	Total % of Responses
Workshop 1-Memphis	10	8	1	19	25%
Workshop 2-Middle TN State Univ.	7	4	1	12	16%
Workshop 3-Univ. of TN, Knoxville	13	11	1	25	32%
Workshop 4-East TN State Univ.	11	10	0	21	27%
Total # of Responses	41	33	3	77	100%
Total % of Responses	53%	43%	4%	100%	

Questions 3-20: A tabular presentation of responses for questions 3-20 may be found in Appendix B.

Participants in the 1980 NETSW Program responded favorably to the training they received and to the teacher-food service manager team approach to nutrition education. Ninety-two percent of the questionnaire respondents felt their 1980 NETSW training enabled them to be "very effective" or "effective" in making nutrition education a part of their school curriculum. Almost all, (99%) of the participants had conducted "sharing sessions" to acquaint others with the NET Program. A total of 1300 teachers and 388 food service personnel were reached through these sessions.

The 1980 NETSW participants responding to the questionnaire estimated they had reached 19,889 individuals through nutrition education activities during the 1980-81 school year. This figure included 13,682 students, 3,222 parents and 1,487 teachers.

Most of the 1980 NETSW participants indicated they would be involved in nutrition education the following year. Seventy-eight percent said they would be "very involved" to "moderately involved." Only 4% said they would be uninvolved.

The four activities which were identified as being the most helpful components of the 1980 NETSW Program included:

1) looking at and using nutrition-related materials,
2) working together as a team at the workshop,
3) sharing ideas and plans with other teams, and
4) writing the BHAP.

The interpersonal skills portion of the workshops was identified by 42% of the respondents as the least helpful component of the 1980 NETSW. Other portions of the workshops which were not viewed as particularly helpful included not having enough time to study the nutrition content or to develop the BHAP, and the testing, evaluations and reviews.

Workshop participants were asked for their opinions concerning the effectiveness of the materials they received in the summer workshops. All of the materials listed, i.e., USDA - "FOOD", resource list, brochures/catalogs, "Good Foods Coloring Book", Activity Booklet, Activity Packets, and recipe ideas were rated as "very effective" or "somewhat effective" by at least 80% of the respondents. No one rated any of the materials as "very ineffective."

Respondents reported satisfactory progress on their BHAPs. Only 9% said they had had to make extensive changes (changed more than half) in the BHAP developed during the 1980 NETSW. Of those making changes in their BHAP most indicated they had added to the content of their plan or changed their time line. Eighty-six percent reported that they had been "very successful" to "moderately successful" in implementing their BHAP. Eighty percent reported that student involvement with nutrition education had been the most successful component of the BHAP. When asked what component of the BHAP had been the least successful, 45% checked parent involvement and 37% checked sharing sessions.

Respondents indicated they were involving parents in nutrition education as a part of their BHAP. Parents were said to be involved in nutrition education through PTA meetings, in providing "nutritional" snacks for children, and eating in the school lunchroom with children. Most respondents, 51%, indicated parents had been involved in more than one of these ways.

Increases in student consumption of nutritious food were measured through plate waste surveys, 46%, "one bite" clubs, 8%, and increased consumption of special food groups, 14%. Eighty-five percent of respondents indicated they would also measure increases in student knowledge related to nutrition education as a part of their BHAP.

Seventy-seven percent of respondents felt the implementation of their BHAP had increased student involvement in decision-making about school feeding programs. School breakfast programs had been used by 63% of the respondents for teaching children about nutrition and 100% indicated they had used the school lunch program for teaching children about nutrition.

Summary

Overall, respondents to the NETSW Follow-Up Questionnaire seemed to feel very positive about their participation in the 1980 NETSW and about the implementation of their BHAPs. Ninety-two percent of the respondents felt their 1980 NETSW training had enabled them to be "very effective" or "effective" in making nutrition education a part of their school curriculum. Ninety-nine percent of the participants had held "sharing sessions" to acquaint others with the NET Program. Respondents reported reaching 19,889 individuals through nutrition education during the year.

The opportunities to observe and use nutrition-related materials, to work as a team and to write BHAPs were identified as being the most helpful components of the 1980 NETSW. Sections of the workshops not viewed as favorably included interpersonal skills portions, testing and evaluation procedures and time constraints. If the workshops were to be held another year these concerns should be addressed.

Most NETSW participants felt good about the progress and implementation of their BHAPs. Eighty-six percent reported that they had been "very successful" to "moderately successful" in implementing their BHAP. Student involvement was reported by 80% as being the most successful component of the BHAPs.

In reviewing the overall positive tone of responses to questions on this instrument it seems NETSW participants felt good about their participation in the workshop sessions and their subsequent involvement with nutrition education.

CHAPTER 5

EXPANSION GRANTS

Pamela Freeman

Questionnaire for Non-participants

Purpose

Schools from which teachers and food service managers participated in the 1979 Nutrition Education and Training Summer Workshops were eligible for $200 Expansion Grants for projects to supplement nutrition education activities. There were 83 eligible schools from which no applications were received. The purpose of this part of the NET evaluation was to identify reasons for non-participation by eligible schools.

Procedure

Questionnaires (see Appendix C) were sent with return envelopes to the 83 teachers who participated in the 1979 NETSW but who did not apply for Expansion Grants. Part A of the questionnaire included a list of possible reasons for not applying for the grants and space for writing additional reasons or comments. Respondents who indicated in Part A that there were too many requirements for the "Back Home Action Plans" (Part A, Item 10) were asked to indicate in Part B which of the requirements were considered to be excessive. Questionnaires were sent to the teachers during the first week in December with a requested return date of December 19, 1980.

Findings

Thirty-four questionnaires were returned, representing a 41 percent response. Items in Part A, excluding "other" (Part A, Item 11), which were identified as reasons for nonparticipation in the NET Expansion Grant program are summarized in Table 5.1.

TABLE 5.1. Summary of Responses to Part A, Items 1-10

Item		Number of Respondents	Percent of Respondents
(1)	Application procedure too complicated or time-consuming	17	50
(10)	Too many requirements for "Back Home Action Plan"	15	44
(7)	Too many progress reports required during year	14	41
(9)	Scrapbook requirement too time-consuming	10	19
(3)	Could not meet application deadline	9	26
(8)	"Share Sessions" not possible to implement in my school	8	24
(5)	Lack of support/authorization from administrators in my school or school system	5	15
(2)	Did not realize my school was eligible	2	6
(4)	Believed competition would be too rigorous for my school to be selected	1	3
(6)	$200 insufficient to carry out described plans	1	3

Responses to Part B, requirements for the "Back Home Action Plan" (BHAP) believed to be excessive, are summarized in Table 5.2. Seventeen persons responded to Part B. Two persons completed Part B, even though they did not identify in Part A (Item 10) the requirements for the BHAP as a reason for not applying for the expansion grant. These persons' responses are included in Table 5.2.

TABLE 5.2. Summary of Responses to Part B

Item	Number of Respondents
(1) Incorporate a new teacher(s) into the "team"	13
(9) Include objectives using NET form for BHAP	9
(6) Include parental nutrition activities at school and at home	8
(7) Design pre- and post-nutrition assessments	8
(5) Include student nutrition activities in the home	6
(8) Account for methods of spending funds for BHAP activities	4
(2) Develop a Problem Statement	3
(4) Include student nutrition activities in the lunchroom	2
(3) Include student nutrition activities in the classroom	0

Part A, Item 11, provided space for additional reasons for not applying for a NET Expansion Grant. Comments received on this item (see Appendix C) are grouped into general categories in Table 5.3.

TABLE 5.3. Summary of "Other" Reasons From Part A, Item 11

Reason	Number of Respondents
Change of staff	7
Lack of time to carry out plan	7
Lack of cooperation among persons involved	4
Lack of time to plan together as team	3
Illness of team members	3
Closing of school	2
Too much work for $200	2
Constraints on use of money	1
Other funding sources available	1

Summary

The major reason given for nonparticipation in the NET Expansion Grant program was that the application procedure was too complicated or time consuming. Many respondents also believed that there were too many requirements for the "Back Home Action Plan" and too many progress reports required during the year. Incorporation of a new teacher into the team was the BHAP requirement that presented most problems for eligible applicants who did not participate in the program. Change of staff and lack of time to carry out the plan were additional reasons that were given by several respondents.

Discussion

Less than half of the persons to whom questionnaires were sent responded. Nonetheless, the information received from the 34 persons (41 percent) who did respond can be useful in administering future Expansion Grants. This group of respondents represents 34 teams, nearly as many as the 40 teams who applied for Expansion Grants.

The findings can be divided into those which can be useful to expansion grant administrators and those which cannot be controlled. Those in the latter category include failure to apply because of school closings, illness of team members, and availability of other funding sources. These comments were not a negative reflection on the NET program. In fact, several respondents wrote very positive comments, indicating that the workshops had been enjoyable and requesting that they be kept informed about the program. The remainder of this report will consist of recommendations based on the findings in the first category - those which can be useful to expansion grant administrators.

Recommendations

In general, it is recommended that the amount of time required for applying for the grants and for reporting on programs be minimized. A brief (one page) application form and one progress report (annually) are recommended. Most of the respondents apparently believed that $200 is sufficient for the intended purpose, but considered the guidelines to be excessive. Therefore, it is recommended that as few constraints as possible be placed on use of the funds to allow flexibility with minimal paperwork. Thirteen (38 percent) respondents specified that incorporation of a new teacher into the team was an excessive requirement for the "Back Home Action Plan." In view of the comments in Part A regarding difficulty in finding time to plan together as a team and the changing of staff in the schools, elimination of this requirement, if possible, might have increased participation in the Expansion Grant program.

Expansion Grant Evaluation

Evaluation Procedure

Guidelines for applying and applications that had been submitted by Expansion Grant participants were reviewed to determine expected outcomes of the Expansion Grant program. Based on this review, a "Scrapbook Summary Form" was drafted (see Appendix D, Attachment A). One of the requirements specified for the Expansion Grant program had been for participating teams to compile a scrapbook of activities made possible by the grants. The "Scrapbook Summary Form" included space for listing and rating objectives and expected outcomes and was to be completed by each team. The draft of this form was reviewed by teachers in four schools in which Expansion Grants had been awarded. The teachers were asked to review the form in terms of appropriateness and ease in responding. After receipt of these teachers' comments, the listing portion of the form and two of the objectives (to develop a problem statement and to account for methods of spending funds) were eliminated.

The revised "Scrapbook Summary Form" (see Appendix D, Attachment B) was sent to the forty participating teams on May 1, 1981 with a requested return date of May 13 (see Appendix D, Attachment C). A reminder note (Appendix D, Attachment D) was sent on May 21. Telephone calls were made on June 1 to those teams whose forms had not been received. Forms were completed by 67.5 percent (27 teams) of the 40 Expansion Grant teams. One of the forms was not included in the analysis because ratings had been omitted on two of the objectives. Means were computed for the rating of each objective in Part A and for the overall rating, Part B. Comments written in Part C of the form were summarized.

Findings

All of the mean success ratings for items in Part A were higher than 4.5 (i.e., higher than "moderately successful" on a scale in which 1 = not successful and 7 = very successful). The range of means was from 4.5 to 6.3. Means for each objective are listed in Table 5.4. As shown in the table, the inclusion of student nutrition-related activities in the classroom and in the lunchroom were considered by the teams to be highly successful. The least successful outcomes were the inclusion of parental nutrition-related activities and the share sessions.

Table 5.4. Means for Part A Items.

Objective	Mean
Include new teacher in the team	5.8
Include student nutrition activities in the classroom	6.3
Include student nutrition activities in the lunchroom	6.3
Include student nutrition activities in the home	4.6
Include parental nutrition activities in the school and home	4.5
Design pre- and post-nutrition assessments	4.6
Hold two 60-minute "Share Sessions"	4.5

The mean rating for Part B, the overall rating of the success of the Expansion Grant program, was 6.2. This rating indicates that even though some of the outcomes were considered only moderately successful, the Expansion Grant as a whole was viewed as highly successful. All responses on this scale were higher than 5, except one response which was 2.

Comments written in Part C are listed in Appendix D, Attachment E. Of the 27 forms that were completed, 18 included comments in this section. The teams appeared to have very positive feelings about the program. Only one team identified a problem, that being that some companies would not take purchase orders and teachers/managers could not get reimbursed from the fund. Many of the respondents indicated that long-term benefits, such as visual aids to be used again in future classes, had been derived from the Expansion Grant program.

Summary and Discussion

The Expansion Grants appeared to have real value as a way of utilizing State NET funds. Teams reported that they had been most successful in achieving objectives related to the inclusion of nutrition activities for students in the classroom and in the lunchroom. The least successful objectives (rated as "moderately successful") involved inclusion of parental nutrition activities and conduct of "share sessions."

Even though $200 may not appear to be a large amount, these grants were a great help to teachers and other team members. In at least one school, every child was exposed to NET activities in that films purchased with grant funds were shown by the librarian to all students. In another school, a mural in the lunchroom was made possible by the Expansion Grant for the benefit of all students and teachers in the school. Student planning of a nutritious menu to be served in the lunchroom to all students was still another way in which the Expansion Grant program affected many students. It is estimated that at least 1775 students were reached by the program.

While most of the teams included no more than two teachers and a lunchroom manager, these small groups were able to use the Expansion Grant funds to reach large numbers of students and some parents. Comments received from the teams were very positive and implied that the jobs of team members had been enriched by the Expansion Grants. In most schools, the opportunity for lunchroom managers to work with teachers to plan and implement NET activities was an exciting and worthwhile endeavor.

CHAPTER 6

PROGRAM DEVELOPMENT PROJECTS

Lynne Roberson

Introduction

In Fiscal Year 1981 the State Department of Education funded six program development projects: one each in Martin, Cookeville, and Lewisburg; and one in each of the counties of Loudon, Hamilton, and Knox. Five of the six projects were reviewed by NET Evaluation staff in December 1980 and January 1981, and a final review was conducted in May 1981. (See Appendix E for individual project reports.)

The sixth project (Knox County) was not implemented as planned. For this reason, it was excluded from this review. The following summary of project goals and objectives is followed by an analysis of the results of the on-site reviews and recommendations for consideration in future program development.

Synopsis of the Projects

Purpose and Objectives

The following descriptive information about the five projects remained the same throughout the project year. The NET State Plan for Fiscal Year 1981 specified four goals for program development. These goals related to nutrition education which linked the school and the home in the education of children; staff development for teachers; staff development for food service personnel in nutrition education and food service management; and the development of curricula and materials.

Generally, all five projects were committed to the nutrition education of children of different ages and to the development of support materials such as curriculum guides or learning modules (see Table 6.1). Two of the projects (Loudon County and Jones School in Lewisburg) had an active program dimension which linked the school, the children and the parents in nutrition education. One project (Cookeville) also included the improvement of the quality of food service as a major project goal.

TABLE 6.1. Summary of Project Objectives in Relation to State NET Program Goals

Place	Loudon Co.	Martin	Hamilton Co.	Lewisburg	Cookeville
Population	K-3	Daycare, K	Jr., Mid., H. S.	K-5(MR/DD)	K-12
NET GOALS (FY 1981)					
I. Nutrition Ed.	Yes	Yes	Yes	Yes	Yes
II. Staff Development - Teachers	Yes	No	Yes	Yes	Yes
III. Staff Development - Food Svc. Personnel	Link	No	Nutrition Education Link*	Link	Yes
IV. Select/Develop Curriculum Materials	Yes	Yes	Yes	Yes	Yes

*Staff development under the auspices of this program included nutrition education only. Education regarding food production for food service personnel was included under the auspices of another program.

With respect to other NET goals, staff development for teachers was included in four of the five projects. In the fifth project (Martin) classroom teachers were encouraged to participate in classroom activities. Staff development for food service personnel was included in two projects (Hamilton County and Cookeville). However, in two other projects staff development in food service was included under the auspices of the food service programs. Only one project had no established links with personnel in school food service (Martin) but food service personnel agreed to work with the teachers the following year. In two projects staff development for teachers and school food service personnel was conducted to foster the development of teamwork in nutrition education. In one other project (Loudon County), the food service manager was involved in all in-service education for the teachers in order to facilitate communications and to promote future collaborative activities.

All projects had informal relationships with other agencies that had a mutual interest in meeting the needs of children. One project (Lewisburg) had an advisory council formed in conjunction with a concurrent project. The council was not used systematically. Several project directors questioned the feasibility of establishing a local Nutrition Council, stating that previous efforts had not been successful. Loudon County anticipated the formation of a council in the future through the efforts of the Farm Bureau Women.

Project Plan and Strategies

All projects were planned for a one-year period. The strategies employed were unique to the goals of the individual projects, which ranged from small, highly individualized programs to large, loosely structured programs. Generally the strategies included the selection and/or development of curriculum materials, staff development and the development of approaches to evaluate the achievement of project activities. Communications with the public and other agencies with mutual interest in the nutrition education of children were included in all projects. Only Jones School in Lewisburg utilized procedures which involved local personnel in goal-setting.

Basis for Project's Purpose and Objectives

Most needs assessment statements were brief, theoretical, and lacked valid data to adequately describe the local needs. The project directors needed explicit guidelines regarding what information to include, and guidance in the selection and/or development of techniques to obtain the data.

Educational needs are determined by examining the discrepancy between expectations for achievement and current performance. The project directors believed that the dietary practices of children needed to be improved through nutrition education in order to improve health as well as to establish dietary practices for the future which would promote health and prevent disease. Some children from each area were from low income families, many of which lacked the means to nourish their children adequately. Both over- and under-nutrition as well as anemia were cited as problems among children of all income backgrounds. The development of feeding skills was also a problem among multiply handicapped children.

In most cases there was little structured nutrition education in the school prior to initiation of the project. Information from state surveys and anecdotal data gathered locally formed bases for the judgment that teachers and school food service personnel needed additional staff development to enable them to implement project activities.

Personnel

Most projects had qualified personnel to direct project development, and adequate staff to implement planned project strategies. The Hamilton County Project experienced a change in personnel during the year. The plan to hire a coordinator did not materialize, and two people shared responsibility until mid-February. During the last few months only one person, an administrator with no background in nutrition, completed the work of the project.

Accomplishment of Objectives

Factors Influencing Implementation

Generally, the factors which contributed to the overall success of the projects included: (1) a high level of commitment of project staff; (2) widespread interest and good communications within the projects and with other personnel in the schools and community; and (3) strong support from administrative personnel at all levels. One negative factor which affected program development related to lead time for initiating project activities. Hamilton County personnel believed that they could have located a coordinator if they had had additional lead time. Time to attend to project development was reported to be a problem for food service personnel in two projects (Loudon County and Cookeville).

Summary of Instructional Methodologies

Each project had a unique approach to the development of the educational program for the population to be served. Three projects were designed to serve a relatively small number of schools or classes. Two of these projects (Loudon County and Jones School in Lewisburg) had individualized instruction. Teachers selected or developed activities which related to the needs and interests of the children. There was some flexibility in the time when planned activities were integrated into the overall curriculum plan. At Jones School nutrition education was integrated into language arts, math, and independent living skills. At Loudon County nutrition was both integrated and taught separately. The third of the smaller projects (Hamilton County) was based on the development of learning modules for use in home economics in six junior high, middle, and high schools (10- to 16-year-old children). The extent to which these modules were individualized is not apparent; however, the local development of the modules enhanced the opportunity to relate learning to student needs and interests.

The remaining two projects served relatively large populations. The Cookeville project was designed to reach children in Grades K through 12 in 100 schools in the Upper Cumberland Region. The focus of this project was an inservice education conference in Fall 1980. The project depended on the mass distribution of a nutrition kit, including nutrient profile cards for use by teachers and food service personnel in the schools. The developmental level of the materials was not determined, so that individualization and integration depended on the judgment of the teachers.

The project in Martin served kindergartens and day care centers throughout Weakley County. Two well-trained graduate students traveled from site to site to implement the plan, which required seven days at each site. The plan included a pre- and post-test and five days of instruction--each day included three activities, each 15 minutes in length.

All projects organized and implemented staff development activities. Loudon County conducted a one-day program at the beginning of the school year for teachers, food service personnel and administrators. Periodic sessions for teachers and the food service manager were scheduled throughout the year. Jones School had inservice education for teachers at the beginning of the year, and the project director provided continuous support to teachers throughout the year. In Hamilton County, a one-week workshop at The University of Tennessee at Chattanooga was conducted for teams of home economics teachers and food service personnel in August 1980. In Martin the two graduate students responsible for teaching in the day care centers and kindergartens received intensive training. And in Cookeville a one-day session for teachers and food service personnel was conducted in Fall 1980.

Materials Selection and/or Development

All projects selected, developed and/or tested materials in the course of curriculum development. The Loudon County project used the curriculum guide Tennessee Educates for Nutrition Now as the basis for program development for children in Grades K through 3. The objectives for this curriculum guide were written with the developmental needs and readiness of the children in mind and were validated by personnel with a variety of backgrounds in the first year of a UTK project (F.Y. 1980). The Loudon County project directors worked with teachers in two schools to select objectives and activities in the guide; procured resource materials recommended in the guide; and organized support for activities to enable the teachers to implement the program. Additional new resource materials were evaluated by the directors in relation to the objectives in the guide. Feedback from teachers was routinely gathered during implementation for use in on-going modification of the program. The impact of the program on knowledge, attitudes, and behavior was assessed through a pre- and post-test procedure using UTK assessment instruments specifically designed to measure the achievement of the objectives in the curriculum guide. The results of this assessment will be included in the final report from the Loudon County Project.

The University of Tennessee at Martin project systematically implemented a program for young children in day care and kindergarten. This curriculum unit had been developed for use in a thesis project the year before. The curriculum unit was tested on a limited scale through thesis research prior to the design and implementation of this project. The results of a pre- and post-test assessment may validate the outcome of the thesis research as well as identify dimensions of the materials and testing procedures which need to be modified. The developmental characteristics of the children were taken into consideration in the development of the unit. In at least one center, students were encouraged to participate in accordance with their interest in the activities. Given a "free choice" situation, most children participated continuously throughout the week. In most settings, however, all children were taught the unit at the same time.

At Jones School in Lewisburg, a variety of activities requiring materials were developed in relation to overall goals and objectives for the curriculum. The expectations for the level of achievement were modified to reflect the developmental level of the individual child, given the child's unique developmental problems and potential. These goals, objectives, and activities were described in materials to be included in the final report of the project. This comprehensive set of materials appeared to have value for those interested in individualized instruction and in the education of mentally retarded and multiply-handicapped children.

In Hamilton County six learning modules were developed for use with children in the age range of 10 to 16 years. Inservice education was provided at UTC for the six teams responsible for development of the modules, and the UTC faculty reviewed the completed modules prior to their use in the classroom. A pre- and post-test procedure designed to assess changes in knowledge, attitudes, and behavior accompanied each module. The results of the assessment will be included in the final report of the project.

At Tennessee Technological University in Cookeville, a nutrition kit was developed and distributed to approximately 50 to 60 representatives of schools in the Upper Cumberland Region. The kit featured a set of nutrient profile cards which portrayed the nutrient composition of foods used in the school lunch program. The final report from the project will summarize the limited information available on the utilization of the materials. Generally it appeared that the materials were utilized to a limited extent in a few schools with Grades K through 6 which had highly motivated personnel available to assist with implementation. The developmental level of the materials was not tested, although steps were taken to develop a plan to do this. It is likely that the lack of information on the developmental appropriateness contributed to the limited utilization of the materials. The value of the materials for future use would be enhanced by the availability of this information.

In summary, materials selected, developed and/or tested in the projects will be included in the final reports from the projects. It would be advisable to have these materials evaluated for readability and developmental appropriateness, if this was not done in the course of the project year.

Individual Project Outcomes

Various approaches for assessment were used to evaluate the effectiveness of inservice education and instruction. Methods for assessment of the effectiveness of inservice education included the use of simple questionnaires in three projects and verbal appraisal in two projects.

Mechanisms for feedback for formative evaluation were developed in three projects. These methods included interviews used to track utilization of materials (Loudon County); an analysis of IEPs (Lewisburg); and anecdotal reports (all projects).

In addition, the Martin project utilized a structured questionnaire in the final assessment of the teachers' perceptions of the organization, presentation, developmental appropriateness and other dimensions of quality of the curriculum.

The project director at Hamilton County made site visits to each school involved in the project to assess the effectiveness of the project and to provide direction in completion of the work of the project. Four of the five projects used pre- and post-tests of knowledge and behavior in the final assessment. Two projects used the 24-hour recall of food intake (Lewisburg and Hamilton County). One project used only a report of usage of materials (Cookeville) in the final assessment.

The extent to which these assessment measures will aid in the final evaluation of project goals and objectives will be revealed in the final report from the projects. It is clear that the information gathered pertained to the assessment of student learning; and, to a much more limited extent, to the impact of instruction on behavior. It was not feasible to assess the impact of nutrition education on the health and growth of children or on the strength of family life.

Parental/Community Involvement

In two projects (Loudon County and Jones School in Lewisburg) parents were viewed as an integral part of the program. Parents were encouraged to participate in classroom activities and field trips as well as to contribute information. Information was sent home with the children, and communications were routinely maintained between parents and teachers regarding individual children with special needs. The final assessment questionnaire used with the parents indicated a range of opinions about the program which should be closely evaluated when the results are available. It is believed that greater communications with parents would have enhanced the effectiveness of parental involvement and reduced confusion about the use of a pre- and post-test procedure.

Initially home visits and telephone conferences were conducted at Jones School in Lewisburg. Regularly scheduled group sessions with parents were not feasible, primarily because so many parents were employed. During the latter part of the project year, information about the project was disseminated at a P.T.O. meeting which included teachers, parents, and the children (who assisted with hospitality). Effective involvement of parents was achieved through the sharing of the results of overall development, including nutrition, in multiteam conferences with parents. An individual appraisal of the child's accomplishment was discussed with parents and educational objectives were planned accordingly.

In the other three projects the involvement of parents was not an integral feature of the program. In Martin children were encouraged to share information with parents and requests for additional information were fulfilled. In Hamilton County and in Cookeville, structured communications with parents were reported to be minimal.

All projects had established links with other agencies, and communications were maintained through speaking engagements, informal conferences, and council activities. The public was reached through periodic news releases from most project sites.

Summary and Recommendations

The program development projects provided an opportunity for personnel to develop approaches to nutrition education and staff development which reflected the unique circumstances of local education systems. Each project took a step forward in nutrition education, and a step closer to the development of curricula which reflect the individual needs and interests of children. Curriculum development may occur by "successive approximations"; each step forward brings people closer to understanding the most effective means to achieve goals and to capture this approach in a curriculum plan. Thus, among the five projects which were completed, the variation in approaches and effectiveness can be viewed in the perspective of the long-range development of the nutrition dimension of the overall curriculum as well as the development of the school system itself. Each project identified its own way to facilitate overall educational development.

Project directors demonstrated a need for guidance and/or support in needs assessment activities, in program budgeting, and in various aspects of program development including formative and summative evaluation. The following recommendations relate to general findings of the site reviews:

1. Provide explicit guidelines and technical assistance in needs assessment activities. Promote analysis of the developmental characteristics, needs, and interests of the children as a basis for determining project goals and strategies for individualized instruction. Request information about the role of other programs in the school and agencies/groups in the community which address the same needs (eg. NETSW, Nutrition Councils, etc.).
2. Link development of the nutrition education program with existing local mechanisms for curriculum goal-setting and determining priorities. Involve local personnel in goal-setting. Promote the use of existing nutrition councils or advisory groups. Emphasize involvement of those with mutual interests, especially parents. Ask project directors who do not have an advisory group to consider the value of formalizing long-standing informal councils only when communities appear to be ready.
3. Encourage project directors to carve out an educational population of a size that permits directors to maximize communications, participate in development and evaluation, and engage in problem-solving with teachers, food service personnel, and parents.
4. Extend the project funding period. Two of these projects benefitted from having curricula developed prior to the project year (Loudon County and Martin). Thus, it was possible to devote the entire year to development of the system to implement the curriculum. Personnel in these projects were able to develop more systematic approaches for assessment than were personnel in projects which developed assessment procedures and implemented the curriculum concurrently. A longer funding period would enable project directors to approach development in phases and to develop the means to assess more long range goals. This would help to overcome the problem of having insufficient lead time available for development of the project.
5. Plan a qualitative review of all materials submitted by project directors along with the final reports, if this was not done by project personnel. The qualitative review should include readability, developmental appropriateness, form, validity of objectives and content, and consideration of the assessment of student learning in relation to educational objectives.

In all five projects it was reported that working relationships between teachers and food service personnel were strengthened. This was a primary goal in three of the projects and an anticipated occurrence in the other two.

The factors which contributed to the overall success of the projects included a high level of commitment of project staff; widespread interest and good communications within the projects and with other personnel in the schools and community; and strong support from administrative personnel at all levels. That these successes helped to generate positive attitudes toward curriculum development was suggested by the expressed intention of people in all five projects to continue their work, if only on a limited scale. This is an important outcome of the NET Program.

CHAPTER 7

WORKSHOPS FOR PERSONNEL IN RESIDENTIAL CHILD CARE INSTITUTIONS

Lynne Roberson

Fall 1980 Workshops

In October 1980 four workshops were conducted by State NET staff for personnel employed in residential child care institutions in Tennessee. The following information was gathered at the workshops by State NET personnel for evaluation purposes. The workshops were held in Chattanooga, Morristown, Nashville, and Memphis to reach personnel in facilities in these cities and in the surrounding geographical areas. In general residential child care institutions provide emergency, short- and long-term residential care for children who are wards of the court, status offenders, pregnant, emotionally disturbed, and/or mentally retarded. Approximately 120 people attended the four workshops, representing a total of 38 child care institutions, one prison for adults, and two other agencies (Head Start and the Tennessee Department of Public Health). Personnel who attended the workshops were primarily houseparents and food service supervisors and staff who bear the responsibility for food service. A few administrators and other personnel attended some of the workshops.

Information which could be used to characterize the food service operations in the child care institutions was available for 30 of the 38 facilities. Nineteen of the facilities had food service operations which required one to four staff members to prepare meals and snacks for the children. Eleven institutions indicated that more than five staff members were needed for food service. Reliable estimates of the number of children served and the actual number of staff involved in food service were not available.

For most facilities there was some information available to characterize the children served. Most institutions served teenage boys or girls exclusively. However, some of the facilities served children in other age ranges between birth and 18 years of age. Several facilities served adults as well.

Participants were asked to rate the training and usefulness of the workshops in general terms, including identification of specific workshop activities or information which were of most and least value to them. Participants also were asked to make suggestions for improvement of the workshops and to identify topics to be addressed in future workshops. Finally, they were asked to write a plan to improve nutrition education in their respective institutions during the period of October 1980 through May 1981.

Forty-seven of the 120 participants submitted evaluation forms (see Appendix F).

- 31 participants rated the workshop excellent; 16 rated it good; and 1, fair.
- 6 participants indicated everything was of value to them, and several more indicated that there were no aspects of the workshop which were of limited value.

- 27 indicated that materials distributed at the workshop were of most value.
- 8 felt the problem-solving discussions were of most value.

Regarding specific content:

- 9 valued menu planning; 5, the information on the type and amount of food needed by children; 3, purchasing; and 3, information on the U.S.D.A. requirements for meal reimbursement.

The number responding to the inquiry regarding the least valuable aspect of the workshop was extremely limited. However, it should be noted that the same number indicated that purchasing was of least value as indicated that it was of most value. This was true also of information presented on the U.S.D.A. requirements for the reimbursement for meals.

With respect to future workshops, five participants indicated a desire for more frequent workshops. A few people indicated an interest in menu planning, food purchasing, techniques for nutrition education, specific information about child nutrition, and other topics.

Participants representing 26 of the 38 institutions wrote a statement which indicated an intent to do something in relation to nutrition education and/or food service in their respective institutions. Most of these statements were not written in collaboration with other personnel from the centers. The chief reason for this is not known, although it would be expected for individuals who attended the workshop alone. Generally, the statements were not carefully written, and the content suggested that additional time was needed to analyze the problems, set priorities, and plan accordingly. The few ideas which surfaced included broader involvement of personnel and, in some instances, children in the improvement of food services; the provision of nutritious snacks at times which do not interfere with meals; and nutrition education to improve the acceptance of food and to reduce plate waste. One person suggested that helping the children learn the value of love might be helpful.

Generally, these comments are of limited value in planning for future workshops. The results suggested that personnel in the facilities have different needs and priorities for service to children and for staff education. A systematic needs assessment might aid in the identification of needs and priorities as well as serve as the basis for goal-setting and program development in the future. However, prior to initiating efforts to develop a program in this area, thoughtful consideration needs to be given to the means to be employed to support personnel in these institutions in their own efforts to develop programs following the workshop.

Spring 1981 Follow-Up Survey

At the four workshops held in October 1980, participants representing 26 of the 38 residential child care institutions wrote statements (back home action plans) which indicated an intention to do something in relation to nutrition education and/or food service in their respective institutions. Although the statements were very limited in scope, suggesting the need for additional assessment and planning activities, it was decided that a follow-up inquiry would be conducted to determine whether the plans were implemented and to assess the impact of the workshops on the services provided in these institutions.

In May 1981 a brief open-ended questionnaire (see Appendix G) was sent to 26 institutional representatives who had submitted plans. Five institutions were in the Chattanooga area; six in the Morristown area; eight in the Nashville area; and seven in the Memphis area. If more than one person from an institution attended the workshop, personnel were instructed to pool their comments on one form. Personnel from 7 of the 26 institutions responded to the inquiry. Most of the responses were obtained from personnel who attended the workshops in Chattanooga and Memphis.

Participants were asked to describe changes (if any) in services to children as a result of participation in the nutrition education workshop and to describe how the workshop helped staff to make these changes. Because the number of responses was limited and the replies were brief, the actual responses are reproduced here for the value which may be derived. It should be noted that six of the seven questionnaires provided enough information to determine that the changes in services did relate to the original planning statement submitted in October.

1. Please describe the changes (if any) in services to children that you and your staff made as a result of your participation in the nutrition education workshop:

   It made our staff more aware of the importance of nutrition, and to put that awareness into practice.

   We buy more fresh fruit now to be used for snacks instead of just using the cookies, candy and snacking cakes that are donated to our agency.

   Each of our girls upon entering our program began an excessive weight gain. We have made more nutritional non-fattening foods available instead of "junky" food for snacks and desserts.

   The Child Care Workers supervise the meals making sure the children select a balanced diet.
   Better food preparation.
   Dessert is not put out until after the main meal.
   Portions of food are appropriate to the age, size and appetite of the children. This results in less wasting of food.

   Using the problem statement. The staff coming together more often. Discussing the problems, if any. Making rules and sticking to our word.

   Helped with menu planning and choices for clients.

   At first we had problems with the girls eating breakfast and I explained to them how important it was to eat breakfast, we don't have that problem any more. They are also eating more fresh vegetables and fruits.

2. How did the nutrition workshop help you in making these changes in services for children?

   I was impressed by their views and ideas for serving nutritious snacks.

   The workshop helped me in many ways. How and what to prepare for each meal and how much to serve. The cookbook was a great help too.

> We were made aware of answers to our problems. Made available nourishing low-calorie foods.
>
> The workshop was outstanding and very helpful in providing new methods to be used to interest the children in proper nutrition. Also, as a result the Child Care Workers have been providing helpful suggestions to the children at meal times in their selection of proper nutritional foods.
>
> Shopping more carefully. Giving the children a better variety of vitamins. Controlling their eating habits better. Being sure everyone eats on time and together.
>
> Exchange of ideas.
>
> How did it help me? Well, most times when you explain things to kids what someone else said that was good for them, you won't have a problem. I also learned the important thing you do before going to the store and that was to eat first.

The personnel from each institution had unique perceptions about the problems, priorities and solutions which required action in their respective institutions. The responses reflected the way in which information obtained in the workshops was internalized and applied to each setting.

There was not enough information to demonstrate the overall impact of the workshops on the 38 institutions represented. However, there was some evidence that personnel in seven institutions had taken steps to initiate improvement in services to children as a result of their participation in the workshops. As indicated in the earlier section describing the workshops, the results of the evaluation suggest that personnel in these institutions have widely differing needs and priorities for service to children and for staff education. A systematic needs assessment might aid in the identification of needs and priorities as well as serve as the basis for goal-setting and program development in the future both within the institutions and at the state level. This is no small task, and consideration would have to be given to the resources available to support such an undertaking. Nevertheless, additional information derived from such an inquiry would be helpful in focusing intervention measures and evaluating the impact of intervention.

Chapter 8

EVALUATION OF NET MATERIALS

"Goody Box" Usage Report

SY 1980-81

Presentation of Data

The "Goody Box" was the name given to a collection of books, pamphlets, and filmstrips on nutrition and nutrition-related topics which was made available during SY 1979-80 to all school systems in Tennessee. Of 148 school systems in the State 130 elected to use the "Goody Box." One person in each school system (i.e., the contact person) accepted responsibility for the kit, overseeing its use by teachers in the system. On receipt of the kit, these contact persons agreed to submit a usage report at the end of the year. A usage report form was mailed to each contact person along with a stamped, self-addressed return envelope. One hundred and thirty usage forms were mailed, and 102 responses had been received by June 16, 1980, for a response rate of 78%.

During SY 1980-81 contact persons for SY 1979-80 received letters expressing appreciation for their help and cooperation. Once again they were asked to complete and return a "Goody Box" Usage Report. One hundred and thirty usage forms were mailed. By July 14, 1981, 95 responses had been received, for a response rate of 73%.

As was the case the previous year, there was no practical way to assess the accuracy of the 1980-81 usage figures. Each system's report was essentially a summary of a number of self-reports by participating schools and teachers. In addition, several contact persons said teachers who had checked out materials had failed to record the total number of students directly influenced by use of the materials. Another contact person submitted a report containing no usage figures at all.

Materials to which the most students were exposed at the elementary level during SY 1980-81 (see Table 8.1) were the following:

- The Snacking Mouse
- National Dairy Council Materials - Food Comparison Cards
- National Dairy Council Materials - Cardboard Food Models

Figures representing the total number of elementary level students directly influenced by The Snacking Mouse decreased* slightly for 1980-81 as compared to figures computed for 1979-80. The estimated number of elementary students influenced by National Dairy Council Materials Cardboard Food Models also decreased during 1980-81. However, the number of times these models were checked out increased during 1980-81 in comparison to the figure computed for 1979-80. On the other hand, the number of times National Dairy Council Food Comparison Cards were checked out decreased during 1980-81, while the number of students influenced by these materials increased during 1980-81.

At the middle or intermediate level, the materials estimated to have directly influenced the largest number of students during 1980-81 were:

- Good Sense and Good Food: The Fascinating Story of Nutrition
- Food Facts and Fallacies
- Spenco Exercise Posters

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*In determining increases or decreases the response frequencies were adjusted to take into account the lower rate of questionnaire return in 1980-81.

School District ____________________

Contact Person __ 62

RETURN TO: TRUDY BANTA
2046 Terrace Avenue
Knoxville, TN 37916

TABLE 8.1

GOODY BOX USAGE REPORT 1980-81

TITLE	NUMBER OF TIMES CHECKED OUT			TOTAL NUMBER OF STUDENTS DIRECTLY INFLUENCED BY USE OF THIS MATERIAL		
	ELEMENTARY	MIDDLE	SECONDARY	ELEMENTARY	MIDDLE	SECONDARY
COOKING AND EATING WITH CHILDREN	140	16	4	6055	822	193
CREATIVE FOOD EXPERIENCES FOR CHILDREN	150	36	189	6103	1274	148
EXPLORING FOODS WITH YOUNG CHILDREN	132	14	3	5079	808	270
FOOD FACTS TALK BACK	56	24	12	1749	815	1907
FOOD FADS AND FALLACIES	172	97	212	5992	2453	1700
FOOD FOR SPORT	45	31	36	1578	1138	1539
FOOD: WHERE NUTRITION, POLITICS, AND CULTURES MEET, AN ACTIVITIES GUIDE FOR TEACHERS	38	20	29	1308	892	2803
FUN WITH GOOD FOODS	99	13	5	2736	665	371
GOOD SENSE AND GOOD FOOD: THE FASCINATING STORY OF NUTRITION	226	85	210	4536	2474	1973
IDENTIFYING NUTRITIONAL DEFICIENCIES	66	25	21	1175	1103	2031
INDEX TO NUTRITION EDUCATION MATERIALS	55	15	192	1229	567	846
INSIDE MY MOM	57	14	51	1275	650	3674
NATIONAL DAIRY COUNCIL MATERIALS CARDBOARD FOOD MODELS	273	29	18	6227	1402	812
NATIONAL DAIRY COUNCIL MATERIALS FOOD COMPARISON CARDS	191	23	23	10363	974	966
NATIONAL DAIRY COUNCIL MATERIALS GUIDE TO GOOD EATING POSTER	85	19	18	3954	667	715
NATIONAL DAIRY COUNCIL MATERIALS NUTRITION SOURCE BOOK	98	12	12	1669	520	1672
NUTRITION FOR ATHLETES	41	26	32	1329	1438	2716
NUTRITION FOR CHILDREN	183	18	2	5820	790	315
NUTRITION FOR YOUNG MINDS	103	31	270	1733	936	2340
NUTRITION IN A CHANGING WORLD-PRESCHOOL	144	8	2	3075	520	90
NUTRITION IN A CHANGING WORLD-INTERMEDIATE	53	33	4	1738	1385	144
NUTRITION IN A CHANGING WORLD-PRIMARY	156	6	2	3634	415	90
PENCIL AND PAPER FUN TO TEACH NUTRITION	291	25	5	5249	1352	425
THE SNACKING MOUSE	454	26	6	14418	1413	527
SPENCO EXCERCISE POSTERS	71	19	11	1974	2288	590

* Count only those students directly influenced by the use of the material. DO NOT try to count children who may have viewed a bulletin board, whose teachers attended an inservice where the kit was displayed, or other indirect influence.

CONTACT PERSON: Please answer the following questions about the GOODY BOX and its use.

2. Are there any materials in the GOODY BOX which you or the people who checked them out considered to be inappropriate for inclusion? If so, which ones?

3. Are there additional materials which you or users would like to add to the GOODY BOX?

4. What other suggestions have you or the users of the materials had for improving the GOODY BOX?

Figures representing the number of students directly influenced by Food Facts and Fallacies increased for 1980-81 as compared to those figures estimated for 1979-80. The number of students influenced by Good Sense and Good Foods: The Fascinating Story of Nutrition remained the same for both years. Spenco Exercise Posters were added to the "Goody Box" during SY 1980-81 so its usage figures cannot be compared with SY 1979-80 estimates.

Materials shown to have influenced the most students at the secondary level during 1980-81 were the following:

- Inside My Mom
- Food: Where Nutrition, Politics and Cultures Meet, An Activities Guide for Teachers
- Nutrition for Athletes

Figures representing the number of students directly influenced by Food: Where Nutrition, Politics, and Cultures Meet for 1980-81 increased in comparison to the figures computed for 1979-80. The number of students influenced by Inside My Mom remained the same for the two years, while figures for Nutrition for Athletes decreased slightly for 1980-81 as compared to 1979-80 estimates.

In addition to information on the usage of each item, the 1980-81 Goody Box Usage Report form included three open-ended questions. These questions also were included on the Goody Box Usage form for SY 1979-80 in an attempt to assess the effectiveness of Goody Box materials. A summary of the answers to these questions for SY 1980-81 is presented in the following section. Question #1 (i.e., In your opinion would the "Goody Box" be better utilized if it were kept in another location?), which appeared on the SY 1979-80 usage form was eliminated from the SY 1980-81 form. It was felt that each school system rather than a State Staff member should be responsible for providing a suitable location for the "Goody Box."

Question #1: Are there any materials in the "Goody Box" which you or the people who checked them out considered to be inappropriate for inclusion? If so, which ones?

The majority of contact persons who responded to the survey said "no" to this question. One respondent said, "All materials good"; another respondent said, "The materials are excellent and are very appropriate." However, two respondents listed the filmstrip Inside My Mom as inappropriate. One person objected to the inclusion of Index to Nutrition Education Materials but did not provide a reason. One respondent listed Food: Where Nutrition, Politics, and Culture Meet and said it was too advanced for elementary students. Another elementary teacher considered Food Facts and Fallacies and Good Sense and Good Food too difficult for elementary students. Finally, one contact person said, "Books, slides, cards, etc. are not as likely to be used as filmstrips and cassettes."

Question #2: Are there additional materials which you or users would like to add to the "Goody Box"?

Thirty-one respondents made general or specific recommendations in response to this question. Among the suggestions were: additional films, filmstrips, and cassettes for all levels (i.e., Grades K-12); more materials for kindergarten students, intermediate level students, and secondary students; more books for student use. One respondent suggested including multi-media kits for the primary grades (i.e., Grades K-3). Another respondent wanted more materials concerning the actual planning of meals. One contact person suggested including in the "Goody Box" a large indexed check-out chart; another contact person said, "Response from many teachers is - 'Not at this time. We are still trying to work out ways to incorporate them into an already crowded curriculum.'"

Specific titles of types of materials requested included:

Filmstrips on nutrition in other countries

Filmstrips on how nutrition and athletics go together

A film on anorexia nervosa

Cardboard food models

Food for Life: The Basic Four (Tupperware)

Breakfast Kit (Kellogg)

Snackology (The California Raisin Advisory Board)

Food: Your Choice Level 4 on Social Studies and Science (National Dairy Council)

Pencil and Paper Fun to Teach Nutrition

Snacking Mouse Goes to School (Doofus Stories)

Question #3: What other suggestions have you or the users of the materials had for improving the "Goody Box"?

Twenty-one respondents chose to make suggestions for the improvement of the kit. One respondent suggested including "more kits than individual items"; another respondent said, "Having a whole list of materials in the box may inhibit some users from checking out the entire box for fear of losing part of them." The majority of the contact persons who responded to this question considered the "Goody Box" an asset to their school system. They were concerned about increasing circulation of "Goody Box" materials. They mentioned such problems as (1) the inability to encourage teachers to check out materials and (2) the inability to get materials to teachers when they needed them. Their suggestions for improving circulation included the following:

- More inservice training encouraging teachers to use materials
- "Goody Box" materials should be displayed where teachers can see them
- One "Goody Box" should be placed permanently in the library of each school in every system

Conclusions

The majority of the respondents to the 1980-81 survey made favorable comments concerning the contents of the "Goody Box." As was the case in the previous year, several respondents objected to the inclusion of the filmstrip Inside My Mom. Respondents again requested the addition of more films and filmstrips as well as materials concerning dietary deficiencies and books for children about nutrition. In contrast to last year's survey, respondents requested filmstrips and materials not only for the kindergarten level, but for primary, intermediate, and secondary students as well. Contact persons responding to the 1980-81 survey were concerned about increasing circulation of "Goody Box" materials.

Consideration should be given to reviewing specific materials which were suggested as additions to the "Goody Box" such as filmstrips on nutrition in other countries, nutrition and athletics, and anorexia nervosa as well as other materials listed under Question #2. Further, more attention should be given to promoting teacher interest in "Goody Box" materials and developing a more efficient method of circulating materials throughout each school system.

"Soup to Nuts" Evaluation

Wilma Jozwiak

Presentation of Data

"Soup to Nuts" is a ten-episode educational television series prepared by the Georgia Public Television Network and provided to Tennessee educational television stations and regional nutrition specialists by the Tennessee NET Program. The series is aimed at the junior high and high school population and features both factual and entertaining aspects. Early in the 1980-81 school year schools and school systems were informed of the availability of the series and of teachers' handbooks through communications sent by their local educational television stations.

Response to the offer of teachers' guides was good. Over 200 schools and nutrition specialists requested the guides. Evaluation forms (see Appendix H) were sent in April to each school and/or specialist on the request list provided by the television stations. Only ten responses were returned. Two respondents could not use the series due to problems with television reception or with obtaining a television. One respondent did not use the series because the "material did not relate to the unit being discussed." The remaining seven respondents represent an extremely low percentage of return. Therefore, any conclusions drawn from these data can be considered to be applicable only to those individuals who chose to respond.

The individuals who responded were for the most part located in urban or suburban settings, and used the series most frequently with 6th graders, although 5th through 12gh graders were represented. Four said they had used all 10 episodes, while one viewed 8 episodes, one viewed 3, and one viewed 2. Only one respondent employed a formal evaluation of student knowledge following the series; this individual used a posttest-only evaluation in which students were asked to prepare a 3-day menu that was evaluated subsequently nutritional adequacy. Two other respondents used informal discussion as a means of evaluating the effects of the series.

The respondents were asked to rate the series on a scale of 1 (Poor) to 5 (Excellent) in terms of how well they thought the series met its stated goals. Their responses on these scales are presented in the matrix below.

	Poor 1	Fair 2	Good 3	Very Good 4	Excellent 5
Goal 1: To acquire sound knowledge of nutrition concepts, principles, and facts			4	2	1
Goal 2: To make food choices that satisfy individual needs and values, yet consider many influencing factors.			2	2	3
Goal 3: To apply nutrition knowledge in specific decision-making situations.			2	3	2
Goal 4: To use school breakfast and/or school lunch programs (Child Nutrition Programs) as learning laboratories for nutrition education.		1	1	3	2
Goal 5: To evaluate personal eating habits and follow good nutritional practices that can result in a healthier and more productive life.			1	4	2

Respondents also were asked to describe the best and worst features of the series, to state whether or not they would recommend the series to other educators, and to explain why or why not. Three respondents who viewed the series did not provide answers to the first question. The remaining four respondents mentioned as the best feature the mature nature of the program orientation, which appealed to the junior high and high school students; the printed materials provided in the handbook; the clarity of the description of the decision-making process; and the links made between attitudes and feelings and nutrition habits. The two respondents who commented on a worst feature mentioned television reception problems and a need for more nutrition facts. All seven respondents said they would recommend the series to other educators. Three mentioned student interest as a reason, while one mentioned a need to provide an alternative to nutrition education which might have been received in the home. Finally, one respondent applauded the emphasis on student responsibility for decision-making related to personal nutrition.

Summary and Conclusions

The "Soup to Nuts" series was well-received by those individuals who chose to respond to the evaluation questions. The extremely low response rate makes it impossible to generalize past the specific respondents. Only one respondent rated any part of the series lower than "Good," and the bulk of ratings were at the "Very Good" and "Excellent" levels. The series is presented on a video cassette which is incompatible with many older reel-to-reel video tape systems available to school systems. This limits in-school use to those schools which receive ETV channels or have a cassette-capable videotape recorder. Because many systems do not own any type of VTR, transfer of the series to 16mm film would seem to be a likely way to increase use. The series became available to educational television stations late in the year, after many already had communicated the Spring schedule to their viewers. Such late scheduling did not allow teachers adequate time to plan the series as part of their yearly academic activity schedule. Increased use probably could be expected if the series were advertised earlier in the year so that teachers could incorporate it in their planning.

Evaluation of THE GOODY BAG
Volume 3, Numbers 1-4, 1980-81

Jean Skinner

The Goody Bag - Nutrition Newsletter for Elementary Teachers continued in its third volume to highlight in a readable format a variety of topics related to nutrition education. A sample issue is presented in Appendix I. Topics in Volume 3 were focused primarily on ideas for teaching nutrition. Examples include Focus on Nutrition Snacks, The "Cook's Corner" in Your Classroom, "Nutrition Tic Tac Toe," Suggestions for Using Games, "The Bake Off," and The Good Food Dragons - Bulletin Board Idea. Both original ideas and ideas adapted from other sources were included. In addition, each issue contained a statement encouraging readers to contribute ideas to share with other teachers.

Issues in Volume 3 contained information about a current nutrition controversy (hyperactivity) and information about NET activities and materials (New Manual Coming - Tennessee Educates for Nutrition Now and The Goody Box).

The information in The Goody Bag was accurate, varied in content, and presented in an attractive and interesting format. Each issue included some art work to illustrate bulletin board ideas or games. References for further information were included with several articles and addresses for additional resource materials appeared with several topics. Issue No. 4 included a brief questionnaire about readers' opinions of The Goody Bag.

The content and format of this publication were appropriate for the intended audience, teachers in grades K-6.

The Goody Bag served both as a means of keeping teachers informed about nutrition issues and NET activities, and as a means of generating enthusiasm about nutrition education in the classroom. It is the recommendation of the evaluators that this publication be continued in its present form with 4-6 issues yearly. In addition it is recommended that as nutrition education emphasis in Tennessee expands to grades 7-12, a similar publication for secondary teachers be added to NET activities.

CHAPTER 9

TENN COMPETENCY WORKSHOPS

Evaluation Questions

The UTK evaluation team worked with TENN Competency Workshop staff to obtain answers to the following questions:

- What are desirable student competencies in nutrition education?
- What activities developed by workshop participants are designed to promote parent involvement in nutrition education?
- How did participants in the 1980 TENN Competency Workshops perceive the effectiveness of the workshop they attended?

The evaluation director met with the director of the TENN Competency Project and examined a copy of the Nutrition Education Instructional Plan, K-6 in order to obtain answers to the first two questions.

Student Competencies

Student competencies were developed and validated during FY 80; they were presented to 1980 workshop participants through the Instructional Plan. Competencies as well as the Instructional Plan underwent further validation and revisions during 1980-81.

Parent Involvement

The following parent involvement activities were developed by the TENN Competency staff and presented at the 1980 summer workshops:

- Parents help children collect pictures of food which they will use to make a picture book of different types of food. Children can mark those foods they have tried.
- A parent letter (written by children or the teacher) explaining to the parents that the class is discussing how eating behaviors influence the way children feel about food is sent home for parents' comments and is returned to the teacher.
- Children make recipe books to take home to parents and to use at home.
- Parents are invited to help plan and attend a tasting party at which nutritious snacks are served; booklets of nutritious snacks are provided at the party.
- Parents are invited to help plan and attend their child's birthday party.
- Parents are invited to bring favorite family foods to class to share with the children.
- Parents are invited to help provide nutritious snacks for children.

- Parents are asked to save old magazines to send to school. These magazines are used by children to make a collage of pictures of nutritious snack foods.
- Physicians, nurses, dentists, dental hygienists, and/or dietitians who visit the class discuss the need for children to work with them and their parents to help the children stay healthy. In a parent letter or at a parent meeting, parents are provided with the information discussed by the health professionals.
- Children make a picture booklet of different kinds of foods. Parents are asked to help collect the pictures.
- Parents are given information concerning a "Two-Bite Club" (a way of recognizing every day each child who tastes every food on his/her plate) in a parent letter or at a parent meeting.
- Parents who have lived in different places are invited to come to class and talk about foods that are common in other places but not available locally.
- A nutritionist is invited to come to a parent meeting to talk about safe sack lunches.
- At a parent meeting or in a parent letter parents are introduced to the new categorization system for foods and asked to help children categorize foods served at home.
- Parents are asked to provide children with ingredients for making different kinds of sandwiches or kabobs.
- Parents are asked to send a vegetable from home. These different kinds of vegetables are used to make vegetable soup in the classroom.
- Parents are asked to contribute special foods for birthday celebrations or holidays.
- Parents are asked to send various plant foods to school with their children for a tasting party consisting of edible portions of various kinds of plants.
- Parents are asked to bring pets to school or share pictures of pets at various stages of the life cycle.
- Children are asked to talk to other people, such as their parents, grandparents, or neighbors, about things they once believed about food but no longer believe.
- Parents or grandparents are invited to come to class to discuss and/or demonstrate food preservation techniques used now and in the past.
- Children interview parents, grandparents, and others from these generations to determine how the foods available in the grocery store today differ from foods available in stores 20-50 years ago.
- Children are asked to bring foods from home for a discussion of foods typical of the region or not typical.
- Children are asked to trace their family background by drawing a family tree. This family background is used in discussing the foodways and food habits of each child.

- Children interview such people as family members, school workers, and neighbors to determine how their family backgrounds have affected the foods they eat.
- Children, with help from the teacher, conduct a survey about food and nutrition beliefs. Various people are included in the survey such as children in the fourth, fifth, and sixth grades; parents; teachers; physicians.

The evaluation team coordinator examined the 1980 TENN Competency Final Report in order to obtain answers to the third evaluation question.

Participant Reaction to TENN Competency Workshops

Participant reaction to TENN Competency workshops generally was positive. At least 93% of all respondents reacted favorably to each structured item on the Nutrition Education Objectives Project Workshop Evaluation Form (see Appendix J). In addition to these structured items, there were four open-ended questions through which participants could react to the workshop they attended. A summary of the responses to these questions is presented below.

Question #1: Which workshop activity was most valuable to you?

Thirty-four percent of the participants said the general overview of the instructional plan and goals of the program was the most valuable workshop activity. Twenty-eight percent of the respondents considered the display, review and evaluation of available resource materials the most valuable activity. Twenty-seven percent of the participants said they benefitted most from the small group discussions held. Twelve percent said they considered the most valuable workshop activity to be the discussions of such topics as (1) how to involve school food service personnel, (2) ideas for teaching units on nutrition to children at various grade levels, (3) nutritional food values, and (4) relationships between "individual and environmental characteristics."

Question #2: Which workshop activity was the least valuable to you?

Forty-one percent of the participants said they thought all of the workshop activities were valuable. Sixteen percent of the respondents said the problem-solving activity was least valuable to them, while 14 percent said the film was least valuable. An additional 29 percent of the respondents mentioned such activities as role play, the overview of games, lectures, "the introduction," "inventory of books," "small groups," and the explanation of the curriculum manual as least valuable to them.

Question #3: What suggestions do you have for workshops of a similar nature to be held this summer?

Forty percent of the respondents said the workshop was "very good," "enjoyable," "adequate;" they did not offer suggestions for improvement. Twenty percent of the workshop participants suggested that more time be spent on demonstration of materials. Eighteen percent recommended "less sitting" and more activity or involvement in workshop activities. Eight percent of the respondents said more nutrition information should be given in workshops. In addition, 16 percent of the participants made such suggestions as using more small groups, incorporating a question and answer period, involving people from the schools (school food service personnel, for example), and discussing ways to evaluate a program after it has been implemented.

Question #4: Other Comments:

Participants' comments in this section of the questionnaire were quite positive, such as:

- Very good.
- Very enjoyable day. Thanks for the lunch.
- The instructors were very knowledgeable and helpful. Friendly, too.
- I enjoyed it very much and think it will be helpful.

Two respondents made concrete suggestions: (1) "I think a copy of Green Eggs and Ham by Dr. Seuss should be incorporated as a lesson in trying new and different foods"; (2) "Make the primary film available to the schools for use with parents."

Summary

The TENN Competency Workshop staff developed and validated student competencies which were presented to 1980 workshop participants through the Instructional Plan. Numerous activities involving parents also were developed and presented to workshop participants through the Instructional Plan.

The overall reaction of the participants to the workshop they attended was very positive. Workshop activities viewed as the most valuable were:

(1) the general overview of the Instructional Plan and the goals of the program,

(2) the display, review and evaluation of available resource materials, and

(3) the small group discussions held.

Least valuable activities listed included the problem solving activity and the film. Suggestions for workshops held in the future included:

(1) more time spent on demonstration of materials,

(2) "less sitting" and more activity or involvement in workshop activities, and

(3) more nutrition information given in the workshops.

CHAPTER TEN

STATEWIDE NUTRITION EDUCATION ASSESSMENT

Assessment Methodology

Planning and implementation of the assessment component of Tennessee's NET evaluation took place over a two-year period. Pretesting of nutrition knowledge, attitudes, and practices, and perceptions of nutrition education was conducted during April 1980. Half of the K-6 schools that participated in pretesting were assigned to a treatment group, half to a comparison group. Personnel in the treatment group participated in a TENN Competency Workshop held during Summer 1980. This workshop was not offered to personnel in comparison schools until Summer 1981.

Teachers and food service managers were given a full year to utilize their training before posttesting was conducted during April 1981. Detailed analysis of the first year's experience provided valuable guidance for management of the assessment component for the second year.

Management of the NET assessment required selecting, training, and supervising 15 temporary part-time personnel (field assistants) to carry out the State-wide testing. Field assistants were required to learn a set of relatively complex tasks (coding instruments, testing children at different developmental levels, conducting food consumption observations, etc.) and to carry them out quickly and accurately in an unfamiliar setting. In addition, they were expected to develop and sustain good relationships with key personnel in the schools. Procedures had to be developed for distribution of test instruments and retrieval of large amounts of data in a relatively short period of time.

Successful management of the complex State-wide assessment required a functional organizational structure. This structure included the following components: (1) a leadership framework, (2) a detailed activity timeline, and (3) a procedure for recruiting, selecting, and training field assistants and utilizing their feedback for program improvement. Each of these components is described below.

Leadership Framework

The leadership framework included: (1) an evaluation director (Dr. Trudy Banta) responsible for overseeing the total assessment: (2) middle level supervisors (Ms. Margaret McCabe and Ms. Wilma Jozwiak) whose responsibilities included training and scheduling; (3) a technical assistant (Pat Keck) to maintain contact with the field assistants, provide materials for testing, and act as a source of quality control for the data as it was returned; and (4) clerical personnel (Pat Keck and Robin Huggins) whose responsibilities included arranging transportation and lodging for field assistants, completing paperwork for employment and travel, and maintaining communication among the members of the project.

Activity Timeline

The evaluation director and supervisors functioned as a team to develop a detailed activity timeline (Time Schedule for NET Assessment), assigning each activity to one or more members of the assessment staff. A copy of this timeline appears in Appendix K. One very important prerequisite activity included in the timeline was the contacting of school personnel--principals, teachers, school food service supervisors, local nutrition education specialists--in order to schedule data collection. This process began for the second year of the assessment in December 1980 with the mailing of letters expressing appreciation for help in the Spring 1980 Assessment and enlisting support for testing in 1981. These letters first were sent to school food service supervisors and local nutrition education specialists. In January 1981 contact letters were sent to principals of treatment and comparison schools involved in the 1980 NET assessment. Each of the letters to principals contained a NET School Information Sheet (see Appendix K); the principal or contact person in that school was asked to fill out this sheet and return it to the UTK evaluation team. (Information concerning treatment/comparison schools and principals/contact persons also appears in Appendix K.)

Wilma Jozwiak developed a state-wide testing schedule the dates from which were inserted in the 1981 NET Assessment Form (see Appendix K) and sent to participating schools. In an accompanying letter the contact person or principal in each school was asked to fill out the form and return it to the UTK evaluation team. Additional telephone contacts were made if the NET testing date established by the assessment staff was indicated as inconvenient or impossible by the principal or school contact person. Field assistants also contacted by telephone each school to which they were assigned to introduce themselves and confirm the established testing date.

Recruiting, selecting and training field assistants and utilizing their feedback for program improvement

The evaluation director and supervisors also developed a structured procedure for recruiting, selecting, and training field assistants and utilizing their feedback for program improvement. Initially several area principals were contacted and asked to recommend substitute teachers whom they thought qualified for the job. These persons, along with several applicants referred to the evaluation team by the University of Tennessee Employment Office, were contacted by telephone; if they were interested, they were asked to provide pertinent information which was recorded on the Field Assistant Application form (see Appendix L).

Application forms were reviewed by Dr. Trudy Banta, Ms. Margaret McCabe, Ms. Wilma Jozwiak, and Ms. Karen Weddle. The most qualified applicants were asked to come for an interview. The interview consisted of both a group and an individual session. Questions used in individual and group settings also appear in Appendix L. Applicant answers to these questions were rated by each interviewer using a Field Assistant Interview Evaluation form (see Appendix L). Applicants with the highest ratings were selected to fill 15 field assistant positions.

A day-long training session was conducted for those persons selected as NET field assistants. Wilma Jozwiak was in charge of planning this session, and several other team members participated in the actual training. A copy of the agenda for this training session appears in Appendix M. At the beginning of the meeting, each field assistant was given a notebook containing Guidelines for Field Assistants (see Appendix M) and Coding Instructions for NET Field Assistants (see Appendix M).

Forms and materials were packed in boxes for field assistants prior to each of his/her assessment assignments. A checklist was used to make sure all items had been included (see Appendix M). Further, field assistants were required to fill out a NET 1981 Spring Assessment Checklist (see Appendix M) at the end of each assessment assignment to insure that each activity had been completed and all materials accounted for. Field assistants also were asked to fill out an Assessment Evaluation form (see Appendix M). Comments from these evaluation forms as well as more informal feedback received from field assistants were used by the evaluation staff to monitor and improve the assessment process.

Assessment of Nutrition Knowledge, Attitudes, and Practices

Jo Lynn Cunningham

Nutrition knowledge, attitudes, and practices were assessed as part of the total data collection procedure using the Comprehensive Assessment of Nutrition Knowledge, Attitudes, and Practices (Cunningham et al., 1981). This instrument was developed specifically for the Tennessee NET project and was administered as part of the questionnaire "Assessment of Nutrition Knowledge, Attitudes, and Practices and Perceptions of Nutrition Education" Banta et a., 1980). See Appendix N for a sample instrument. As in 1980, data were collected from students, parents, and school personnel (teachers, administrators, and food service managers and workers) in both treatment and comparison schools.

Analysis Procedures

Three basic approaches were taken with the statistical analysis of the nutrition knowledge, attitudes, and practices data. In each case, separate analyses were conducted for each group (e.g., students in a given grade, parents, elementary school teachers).

With the first approach, a simple comparison between 1981 scores for participants in the treatment group and those in the comparison group was made. For this comparison, a one-way analysis of variance (ANOVA) model was used, with the individual as the unit of analysis. A multivariate analysis of variance (MANOVA) was computed using knowledge, attitudes, and practices as the dependent variables; in addition, the associated univariate ANOVAs were computed. An advantage of this approach is that the sample size for most groups is large enough to permit a meaningful analysis. One disadvantage is that the assumption of independence of observations is violated by ignoring the school or classroom with which the individuals were associated. Perhaps a more significant disadvantage is that the 1980 data were not included, so any initial inequalities between groups were not taken into account.

A second analytical approach was a comparison between scores for participants in the two years (1980 and 1981) as well as between groups (treatment and comparison) and the interaction between the two (year by treatment group). A two-way analysis of variance (ANOVA) model was used for both multivariate and univariate analyses. The school was used as the unit of analysis: because the same schools were used both years, even though different individuals were assessed, year was treated as a repeated measures dimension in the analysis. In the analysis, greatest effectiveness of the NET program would be reflected in a treatment group by year interaction, with treatment group scores higher than comparison group scores for 1981 but with no differences between the groups for 1980. An advantage of this second statistical model is that it is consistent with the idea of a school as a unit (particiularly relevant with the team approach stressed in the nutrition education program), and data from both years are used. A disadvantage is that, even though data from both years are used, there is no straightforward interpretation of potential gains adjusted for any initial inequalities. The most serious limitation, however, is that the number of schools is very small, making the test a very conservative one.

The third kind of statistical analysis also involved use of the school as the unit of analysis. With this approach, 1981 scores were analyzed for differences between treatment and comparison groups, but these scores were adjusted for the corresponding 1980 scores. Thus, the test was a one-way analysis of covariance (ANCOVA) for differences between treatment groups, using the 1981 scores as the dependent variables and the 1980 scores as covariates. Only univariate analyses were computed using this model. Theoretically, this approach was the most appropriate one, as it does not have the disadvantages of the other two models. However, the degrees of freedom were even more limited than with the second approach, which made its value rather questionable from a pragmatic perspective.

An alpha level of .10 was used as the criterion for significance with all analyses. This relatively liberal level was used because of the loss of power resulting from design limitations. In most cases, however, results that were significant using the .10 criterion also were significant using a .05 or even a .01 criterion with the large-sample analyses (primarily those in which the individual was used as the unit of analysis).

In analyzing results, univariate analyses also were considered independently of multivariate analyses. Thus, a few univariate differences were identified that were not reflected in significant multivariate results. These occurred primarily within the small-sample analyses. Again, the more liberal reporting strategy was used because of power limitations resulting from the small sample sizes.

Results

Because the primary focus of the nutrition effort during the project period was students in grades K-6, major attention in the analysis was devoted to this group. Results for parents and teachers of the elementary school students also were highlighted.

Elementary school students. As shown in Table 10.1, results of the one-way MANOVA (with the individual as the unit of analysis) reflected differences between the treatment and comparison group children in grades K, 1, 3, 4, and 6. Differences between the groups also were shown in the univariate test for knowledge in grades K, 1, 4, and 6; for attitudes, univariate tests reflected differences between the groups for grades 1, 3, 4, and 6; for practices, the univariate tests were significant for grades 4 and 6. As shown in Table 10.2, all differences were in favor of the treatment group.

As shown in Table 10.3, the only treatment group by year interaction in the two-way repeated measures ANOVA was for attitudes of children in grade 4. As shown in Table 10.4, for children in grade 4, attitude scores were higher for treatment group children than for comparison group children in 1981, although the reverse was true in 1980. The only difference between treatment groups was for attitudes of children in grade 6. Differences between years were reflected in the multivariate test for grade 6; the univariate test for knowledge for grades 1, 2, 4, 5, and 6; the univariate test for attitudes for kindergarten; and the univariate test for practices for grade 3. All differences were in favor of the treatment group children and/or children assessed in 1981.

As shown in Table 10.5, the one-way ANCOVA results (with school as the unit of analysis) reflected a difference in knowledge for children in grade 1 and differences in attitudes for children in grades 3 and 6. As with the other analyses, differences were in favor of the treatment group.

Elementary school teachers. As shown in Table 10.6, the one-way MANOVA (using the individual as the unit of analysis) was significant for grade 3 teachers, as well as for kindergarten teachers. As shown in Table 10.7, differences were in favor of the treatment group of grade 3 teachers and for the comparison group of kindergarten teachers.

Because of the very small sample sizes, analyses with school as the unit of analysis were done only for the total group of elementary teachers. As shown in Tables 10.8 and 10.9, no differences were reflected in these analyses. Summaries of scores by year and treatment group are shown in Table 10.10.

Elementary school parents. As shown in Tables 10.11 and 10.12, no differences between parents of children in treatment and comparison groups were reflected in the MANOVA or ANOVAs using the individual as the unit of analysis; neither were there differences reflected in the ANCOVAs using the school as the unit of analysis. As shown in Table 10.13, however, there were differences in the MANOVA and also in the ANOVA for knowledge with respect to year. As shown in Table 10.14, the differences reflected higher scores in 1981 than in 1980.

Other groups. Because all secondary school participants were in the comparison group, only differences between years could be tested. No differences were found for students, teachers, or parents. Neither were differences found for other school personnel in relation to either year or treatment group.

Discussion

A positive impact of the Tennessee Educates for Nutrition Now (TENN) curriculum was shown for the target group. Some differences in favor of students in the group exposed to this treatment were shown for five of the seven grade levels. Of the 33 significant results obtained for all groups (children and adults), only 1 was not in the expected direction (that for practices of kindergarten teachers); for several reasons, it is likely that this one difference was the result of random significance (e.g., the large number of analyses performed; the relatively liberal interpretation of significance within which this result falls; the lack of significance in the multivariate test within which this univariate analysis falls; the consistency of the pattern for all the other significant results, particularly those involving only treatment group differences). Despite the limitations inherent in the various analyses, the consistency of the pattern observed provides a substantial basis for concluding that the TENN approach was an effective one.

In several respects, this evaluation of the TENN plan was a conservative one. For example, this evaluation was based on the field test copy of the instructional plan, a document that subsequently has been revised and refined. The amount of training received by the school personnel (one-day workshops) was an additional limitation. Furthermore, because this was the first year for use of the TENN plan, students had been exposed to less than one school year of the plan; this limitation is particularly critical because the model for the TENN plan is a sequential and integrated 13-year program. Certainly some progress might be expected each year, but the total impact logically would be the comprehensive product of participation in the total program.

As typically occurs, gains were greatest on the knowledge dimension. In part, this result may have a methodological explanation, in that reliability indices for the attitudes and practices scales were lower than were corresponding indices for the knowledge scales, particularly for students at the lower grade levels. From a theoretical perspective, it is reasonable to expect that with more time these gains would be extended to attitudes and practices; however, the validity of this expectation remains to be tested.

The target group for the TENN plan was elementary school children, with the teachers as the primary vehicle for program delivery. Therefore, it is natural that the greatest impact was reflected for children, with secondary impact on teachers. The fact that there were any differences for the teachers and parents of elementary school children--the groups having the most direct relationships to the children--illustrates the possibility of ripple effects, which might be expected to be amplified with a greater amount of time for exposure.

In summary, the TENN instructional plan for grades K-6 appears to be an effective method of nutrition education for elementary school students. Its specific strengths and weaknesses (e.g., in relation to topic, grade level, impact over time) need additional consideration. However, the basic approach is one that has the potential for improving the nutrition knowledge, attitudes, and practices of Tennessee children.

References

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Assessment of Perceptions of Nutrition Education

Wilma Jozwiak

Rationale

An individual's perceptions of a thing or idea are mediated by his/her personal characteristics and experiences. Perceptions are slow to change. Even in the face of contradictory evidence, individuals sometimes hold on to inaccurate perceptions. Only when a balance of contradictory information builds up over a period of time will the perceptions be altered. The amount of information and the period of time required to shift the balance will vary from individual to individual. Because perceptions affect behavior, it is appropriate to consider the nutrition-related perceptions of individuals who participated in Tennessee's Statewide Nutrition Education Assessment.

The TENN Competency Workshops which constituted the treatment phase of the NET evaluation focused on planning the nutrition education curriculum for each participating school. Participants were encouraged to plan creative implementation activities in multiple learning modes. Teachers and food service personnel were encouraged to plan activities which allowed both to play a part in implementation. Such a plan, using different types of approaches and involving more than one person for instructional delivery, had a chance of providing the positive information balance necessary to change perceptions. Therefore, although perceptions could not be expected to change greatly in the period of one year, measures of perceptions of nutrition-related issues were included in all forms of the NET Statewide Assessment.

Methodology

A set of items designed to measure perceptions was included in the questionnaire "Assessment of Nutrition Knowledge, Attitudes, and Practices, and Perceptions of Nutrition Education" (see Appendix N). A Likert-type response format was used on perception items; adult forms and the forms for grades 7-9 and 10-12 employed a 5-response format, whereas the response formats for younger students were varied appropriately for the developmental level of the student group. In addition, a seven-item question with a yes-no format was included to elicit respondents' opinions of the quality of food service in their schools. The seven items used were obtained from responses to a similar open-ended question included in the 1980 assessment.

A .05 level of significance was required to reject the null hypothesis. Data from the 1980 Statewide Assessment were analyzed (see 1980 NET Evaluation Final Report) and yielded no significant differences. Only significant differences in the 1981 data are reported in this summary. Response percentages are recorded in Tables 10.15 - 10.27.

Findings

Students, Grades K-1. The Spring 1981 responses of students in grades K-1 were subjected to chi square analysis to determine the areas of significant difference. There were no differences between the post-treatment responses of kindergarten students in treatment and comparison schools. First grade students in the treatment schools (89%) were more likely than comparison students (80%) to say that they would like to help decide what would be served for lunch, and to say that they indeed help to do so (37% versus 52%). Treatment school first grade students alo agreed more often that they ate the lunch fixed at school (92% versus 86%).

Both treatment and comparison students in kindergarten and first grade were highly likely to express approval of the lunch fixed at school, and to say that they enjoyed learning about foods that are good for them. Both also usually ate the lunch fixed at school, and tended to agree that they received nutrition education at school and at home.

Students, Grades 2-3. Responses of students in grades 2 and 3 were subjected to chi square analysis to determine where significant differences occurred. Students in grades 2 and 3 (combined) in treatment schools (90%) more often stated that they liked learning about foods that are good for them than did comparison students (84%). On the other hand, third grade students in comparison schools more often (67%) said they enjoyed helping decide what food would be served for lunch than did treatment students (58%).

Respondents were asked to indicate changes they thought should be made in the food service program at their school. Treatment school second graders more often agreed that students should be allowed more choices (72% versus 61%), whereas in the third grade students in comparison schools more often agreed that this change should be made (80% versus 70%). Third grade comparison students also more often thought larger portions should be served (61% versus 46%). Third grade students in treatment schools more often said that service should be faster in the lunchroom (51% versus 40%).

Fewer than 10% of students in both grades and both experimental conditions disliked the food served at school, whereas more then 80% liked learning about foods that are good for them. Ninety percent of second grade students in both experimental conditions said they ate the lunch fixed at their schools. Approximately 90% of both grades in both conditions agreed that they learned from their teachers about foods that are good for them, whereas about 75% of second graders and almost 90% of third graders from both experimental conditions agreed that they learned from someone at home about foods that are good for them.

Students, Grades 4-6. A t test was applied to the data from grades 4-6 to determine areas of significant difference. Treatment school fourth graders more often agreed that they liked the food fixed at school a lot (33% versus 27%), and they also less often responded "Never" when asked if they helped decide what would be served for lunch (69% versus 57%). Sixth grade treatment students more often said (76%) they liked helping decide what foods should be served for lunch than did comparison students (68%). However, sixth grade treatment students less often said they always or often ate the lunch fixed at school (62% versus 70%).

Fourth grade treatment students stated less frequently than comparison students that service should be faster in the cafeteria (52% versus 66%), whereas they stated more frequently than comparison students that students should be able to help plan the food service program (78% versus 62%). Fifth grade treatment students stated more often than comparison students that more kinds of foods should be served (89% versus 77%), but more comparison students in the fifth grade thought students should be able to help plan the food service program (75% versus 60%). Most students from fourth, fifth, and sixth grades in both experimental conditions said they sometimes or often learned about foods from their teachers and from someone at home.

Administrators. Administrator responses were analyzed for differences using a t test. Many more treatment condition administrators strongly agreed or mildly agreed that they were satisfied with the level of their teachers' nutrition knowledge (85% versus 39%). Seventy-seven percent of treatment condition administrators strongly disagreed that they should be involved in planning the food service program, whereas only 29% of comparison administrators held that opinion. In a similar vein, more treatment administrators strongly or mildly agreed that food service personnel should be responsible for planning the food service program (71% versus 54%). More treatment administrators mildly or strongly agreed that in their school this was the case (100% versus 77%).

Differences between the treatment groups on the item requesting responses about changing the food service program were not significant. Both groups tended to disagree that students should get larger servings, that service should be faster, and that food prices should be lower. On the other hand, both tended to agree that more kinds of food should be served, students should have more choices, better tasting foods should be served and that students should be allowed to help plan the food service program.

Food Service Personnel. Responses from food service personnel were analyzed for differences using a t test. More comparison group food service personnel strongly or mildly agreed that they were satisfied with the extent of their knowledge about nutrition (81% versus 60%). On the other hand, more treatment group respondents strongly agreed that teachers should be involved in planning the food service program (19% versus 2%). More treatment food service personnel said students sometimes served on taste panels (23% versus 13%) and fewer said students never served on taste panels (53% versus 81%). More treatment group members strongly agreed that school food service personnel should be responsible for planning the school food service program (52% versus 33%). More treatment group members also said school administrators seldom or never were involved in such planning (74% versus 50%), and that parents were seldom or never involved in such planning (94% versus 83%).

Food service personnel from both experimental groups tended to agree that nutrition should be a required college course for prospective teachers. They also tended to be satisfied with the food service program in their school. More than half of both groups felt that teachers should be involved in planning the school food service program.

Elementary Teachers. A t test was applied to responses from elementary teachers to determine areas of difference. Treatment group elementary teachers more often strongly agreed (60% versus 29%) that they understood the NET Program. The treatment group strongly or mildly agreed more often that students should be involved in planning the food service program (67% versus 47%), and also more often strongly disagreed that students actually were involved (69% versus 52%). Likewise, more treatment group members strongly disagreed that parents were involved in such planning (88% versus 74%), and more often strongly agreed that food service personnel were responsible for such planning in their schools (65% versus 49%). Finally, more treatment group teachers strongly agreed (41% versus 19%) that they would attend a summer nutrition workshop provided by the State with inservice credit available.

More than half of the elementary teachers in both experimental groups agreed or strongly agreed that they were satisfied with the level of their nutrition knowledge. They also tended to agree strongly that having coke and candy machines in the schools discourages children from eating balanced meals.

Parents. Parents' responses were subjected to analysis using a t test. More treatment school parents said they would participate in free classes about nutrition (32% versus 23%). More treatment condition parents said their children ate the salad bar option at school (87% versus 81%). Although a few other analyses yielded differences significant at the .05 level, the practical significance of these very small actual differences (no more than 2 or 3 percent) is questionable. Unfortunately, such a large sample tends to render very small differences significant even with conservative treatment.

Parents in both treatment conditions tended to be satisfied with the nutrition education their children were receiving. In most other responses, parents were noncommital, tending to choose a middle-of-the-road answer.

Summary and Conclusions

Highly positive responses by K-1 students on many items suggest that the young children tended to acquiesce, or answer the way they thought they were expected to answer. Treatment apparently produced a more positive attitude toward learning about nutrition for students in grades 2 and 3, and a greater desire to help plan the food service program for grades 1, 3, and 6. However, 6th grade students seemed to have become more aware of the realities of the situation, that is, that they would not be allowed to have a part in planning their school food service program.

The elementary teacher treatment group reported a similar perception of the situation. Administrators and food service personnel from treatment groups agreed that planning the food service program should be the responsibility of the food service personnel, and treatment elementary teachers said that in their schools this was the case. Students tended to perceive both school and home as sources of nutrition education.

Students in both experimental conditions tended to agree that the changes included in the seven-item question about quality of food service should be made. The adults also tended to think most of the changes needed to be made.

Considering the inherent difficulty in changing perceptions, a somewhat surprising number of differences were found to exist between treatment and comparison groups on the perception items. Both students and adults apparently became more aware of the nutrition-related aspects of their school programs. In some cases, they desired changes. Such desires can be the necessary catalyst for initiating an actual change. Increased desire to learn about food and to be involved in food service planning are not congruent with the feeling which was expressed by administrators and food service personnel that planning should be the responsibility of food service personnel. This mismatch of perceptions should be a major point of concern for future planning. Involvement of the school community in planning the food service program is an admirable goal, but it is not likely to be reached until it is perceived as important by principals and food service personnel.

The changes which occurred in student perceptions during the first year of the NET Project can be expected to increase each year. The curriculum is cumulative. Each new year will add to the balance of information about nutrition upon which the student bases his or her perceptions about nutrition.

Assessment of Plate Waste

Jean Skinner

Methods

In the elementary schools (grades K-6) the NET field assistants used observational techniques to determine the approximate amount of food wasted (plate waste) by children participating in the school lunch program in treatment and comparison schools. Five children from each grade assessed within a school were selected randomly as subjects for this portion of the study. Children were not notified that they would be observed in the lunchroom setting.

Using the K-6 Plate Waste Data Sheet (see Appendix O) field assistants noted the amount of food remaining on each subject's lunch tray. Observations were recorded in the following categories: no food left, 1/4 serving left, 1/2 serving left, 3/4 serving left, or all of the serving left. The food was classified in the following categories: main entree, bread, cooked vegetable #1 (starchy vegetable), cooked vegetable #2, raw vegetable, fruit, dessert, milk, and "other," a miscellaneous category. Most meals did not contain food in all categories. Foods such as hamburgers were classified as main entree and bread.

Frequencies in each category of food were totaled for each school. Due to the similarity in food eaten by children in a single school, data were analyzed using the school as the unit of analysis. Several statistical tests were applied to determine differences between treatment and comparison groups.

In secondary schools (grades 7-12) data were self-reported by students using the Food Consumption Form (see Appendix O). To avoid a negative emphasis, this form was designed to focus on the amount of food eaten, rather than that wasted. Students recorded food intake in the following categories: all of serving eaten, about 3/4 eaten, about 1/2 eaten, about 1/4 eaten, and a small taste or none eaten. Data were converted to the amount of food wasted, and foods were classified into the same nine categories as were used on the K-6 Plate Waste Data Sheet. Foods were classified in a coding procedure by a trained research assistant. The sample of students in secondary schools consisted of all students in a previously selected classroom; because the data were self-reported rather than observational, it was not necessary to limit the sample size. Food Consumption Forms were administered by the classroom teachers prior to the field assistants' visits to the schools. Students did not know in advance that they were going to report food consumption.

Data from the secondary grades were summarized for analysis as described for grades K-6 except that they were nct divided into treatment and comparison schools. For comparisons among grades or comparison of food categories a mean percentage of food wasted in each category of food was calculated. For these calculations, individual students' data were used as the unit of analysis. Because raw data were not collected as continuous data but rather in categories (1/4, 1/2, etc.) such comparisons should be interpreted with caution. Only large differences are meaningful; small differences should be ignored because they may not represent real differences.

These data from both K-6 and 7-12 grades represent plate waste on a single day. Menus varied among schools; no attempt was made to standardize menus among schools. The variation in menus adds an uncontrolled variable to the study. It is well recognized by school personnel that certain menus are more acceptable to children than others. The amount of plate waste in a given school may vary considerably from day to day depending in part on the popularity of specific menu items. However, if this variable had been controlled, the results could be interpreted only as an indication of the popularity of specific foods rather than a general picture of plate waste in school lunchrooms in Tennessee.

It is not appropriate to use these data to compare individual schools for several reasons. As stated, a single menu may or may not be representative of the acceptability, the quality, or the quantity of food typically served. All these factors directly influence the amount of plate waste. In addition, the number of students observed within a single school was too small to draw conclusions about the amount of plate waste in that school. Many factors, such as state of health and personal preferences, will influence individuals' reactions to specific food items. Therefore, with these data as with all dietary data there is both inter- and intra-subject variability. Such variability could be decreased by increasing the number of days of data collection and by increasing the number of subjects in the sample. Both procedures would increase the cost of the study.

Another source of error involves the judgments made by field assistants which may have varied over time as well as among different field assistants. Although all field assistants participated in a brief training session, none was experienced in this type of research.

In spite of the limitations in methodology, data from this study can be used to compare treatment and comparison schools and to assess changes over time. The data also provide a description of current plate waste in randomly selected school lunch programs in Tennessee.

Results and Discussion

Usable data were obtained from 560 children in grades K-6 and 302 children in grades 7-12. Distributions of subjects by grade and by experimental group are presented in Table 10.28.

Results of plate waste by food category for grades K-6 are presented in Tables 10.29-10.37. Data are presented as the percentage of children in treatment and comparison groups reporting plate waste in each category. There were no significant differences between treatment and comparison groups in any food category.

The absence of significant differences between the groups does not mean necessarily that the TENN Instructional Plan had no impact on children's food habits. The Instructional Plan emphasizes the nutritional quality of all food and beverages consumed. This Plate Waste Study is focused only on the school-prepared foods eaten for lunch by students; lunches brought from home were not included in the study; food eaten at other times of the day were not included. In addition, eating appropriate amounts of food is emphasized in the Instructional Plan; in some cases leaving food on one's plate--thus creating plate waste--may be more appropriate than overeating.

Furthermore, the Tennessee Educates for Nutrition Now Instructional Plans are designed to be comprehensive and sequential. Full impact of the Instructional Plans will not be evident until they have been in effect long enough for students to progress from Kindergarten through grade 12.

Numerous weaknesses inherent in the methodology also may offer partial explanation for the lack of significant findings. The method employed was not a sensitive test; only large differences could be statistically significant. As stated earlier, the sensitivity of the method could be increased by increasing the number of subjects in the study and/or by increasing the number of days of observation. Both measures would decrease the effect of individual food preferences and the effect of certain unpopular menu items. (The impact of such unpopular items as coleslaw, sweet and sour meatballs, and prune cake was very dramatic in this study.) Methods that weigh or measure plate waste also are more sensitive than those that use observational techniques.

In addition, data were collected by many field assistants. They were assigned schools on the basis of convenience rather than on the basis of each field assistant being assigned an equal number of treatment and comparison schools. The field assistants received minimal training prior to data collection, and variation in their observational skills is quite possible.

Another factor that may have influenced the results is the fact that the food service personnel knew in advance that plate waste would be measured. They knew that their school was a treatment school or a comparison school and thus they had the opportunity to plan to include popular menu items on the day of the survey.

Mean percentages of food portions wasted by children in each grade are presented in Table 10.38. The midpoint in each category was used to calculate an average value. Such a procedure may indicate small differences that do not actually exist; therefore, only large differences should be considered. However, several trends are evident from these data. A higher percentage of food in all categories was wasted by younger children, especially those in Kindergarten and grade 1, than by older children. In the adolescent years plate waste decreased substantially. These data support the "bottomless pit" theory of adolescent food habits. These data also suggest that the younger children may receive food portions that are too large; perhaps plate waste could be decreased with smaller serving sizes and by allowing children to serve themselves.

The data presented in Table 10.38 also suggest that some foods in some categories are more acceptable than others. The main entree and milk were accepted well by most students in this study. Breads and starchy vegetables were accepted well by students in grades 7-12. Raw vegetables and other cooked vegetables were not well accepted by most students. Care should be taken in the selection of menu items and in preparation techniques, especially in the vegetable categories.

Summary

Plate waste observations were made on lunches eaten by 560 children in grades K-6 in treatment and comparison schools. Self-reported food consumption forms were completed by 302 students in grades 7-12. Plate waste in treatment and comparison schools was not significantly different, at least as indicated by the methodology used in this study. More food was wasted by younger children than by older children. Some categories of food generally were more acceptable to children than others: milk and the main entree were well received; vegetables, especially raw vegetables, were not. No attempt was made in this study to investigate the reasons for plate waste; a more detailed and controlled study is necessary to explore the possible reasons for plate waste.

Table 10.1

Analyses of Variance for Differences in Nutrition Knowledge, Attitudes, and Practices of Elementary School Children in 1981 in Relation to Treatment Groups

Variables	F	df	p
	Kindergarten		
Multivariate analysis	3.28	3, 321	.02*
Univariate analyses			
Knowledge	2.96	1, 323	.003*
Attitudes	.002	1, 323	.99
Practices	.78	1, 323	.43
	Grade 1		
Multivariate analysis	4.70	3, 365	.003*
Univariate analyses			
Knowledge	3.54	1, 373	.0005*
Attitudes	1.88	1, 368	.06*
Practices	.71	1, 368	.48
	Grade 2		
Multivariate analysis	.51	3, 341	.68
Univariate analyses			
Knowledge	.40	1, 345	.68
Attitudes	.91	1, 343	.37
Practices	.93	1, 343	.36
	Grade 3		
Multivariate analysis	2.18	3, 343	.09*
Univariate analyses			
Knowledge	.63	1, 345	.54
Attitudes	2.55	1, 345	.01*
Practices	.50	1, 345	.62
	Grade 4		
Multivariate analysis	7.86	3, 431	.0001*
Univariate analyses			
Knowledge	3.34	1, 434	.0009*
Attitudes	4.23	1, 433	.0001*
Practices	2.86	1, 433	.004*
	Grade 5		
Multivariate analysis	1.75	3, 384	.16
Univariate analyses			
Knowledge	1.42	1, 387	.16
Attitudes	.97	1, 387	.33
Practices	.91	1, 386	.37
	Grade 6		
Multivariate analysis	7.78	3, 397	.0001*
Univariate analyses			
Knowledge	3.19	1, 401	.002*
Attitudes	4.59	1, 401	.0001*
Practices	2.17	1, 399	.03*

Note. The unit of analysis was the individual for all analyses.

* Statistic meets criterion for significance.

Table 10.2

Means and Standard Deviations for Nutrition Knowledge, Attitudes, and Practices of Elementary School Children in 1981 in Treatment and Comparison Groups

Variables	Treatment Group			Comparison Group		
	N	$\bar{x}$	SD	N	$\bar{x}$	SD
Kindergarten						
Knowledge[a]	212	11.08	4.42	113	9.58	4.23
Attitudes[b]	212	1.76	.17	113	1.76	.18
Practices[b]	212	1.68	.16	113	1.69	.16
Grade 1						
Knowledge[a]	207	13.06	3.03	168	11.96	2.94
Attitudes[b]	203	1.80	.20	167	1.77	.18
Practices[b]	203	1.70	.18	167	1.71	.20
Grade 2						
Knowledge[a]	188	12.18	3.33	159	12.04	2.93
Attitudes[c]	188	2.43	.36	157	2.46	.37
Practices[b]	188	1.63	.24	157	1.66	.23
Grade 3						
Knowledge[a]	212	13.36	3.11	135	13.13	3.67
Attitudes[c]	212	2.52	.38	135	2.41	.39
Practices[b]	212	1.75	.20	135	1.74	.21
Grade 4						
Knowledge[a]	225	11.00	3.69	211	9.75	4.10
Attitudes[d]	225	3.03	.38	210	2.87	.42
Practices[c]	225	2.10	.29	210	2.02	.32
Grade 5						
Knowledge[a]	236	11.65	4.10	153	11.00	4.85
Attitudes[d]	236	2.95	.37	153	2.99	.34
Practices[c]	236	2.14	.27	152	2.11	.28
Grade 6						
Knowledge[a]	186	13.66	4.07	217	12.30	4.41
Attitudes[d]	186	3.03	.36	217	2.86	.38
Practices[c]	186	2.08	.28	215	2.01	.29

Note. The unit of analysis was the individual for all statistics.

[a] Range = 0-20

[b] Range = 1-2

[c] Range = 1-3

[d] Range = 1-4

Table 10.3

Analyses of Variance for Differences in Nutrition Knowledge, Attitudes, and Practices of Elementary School Children in Relation to Treatment Group and Year

Factors/Variables	*F*	df	*p*
Kindergarten			
Multivariate analysis			
Treatment	.47	3, 10	.71
Year	1.32	3, 10	.32
Treatment x year	.78	3, 10	.53
Univariate analyses			
Knowledge			
Treatment	.90	1, 12	.36
Year	.10	1, 12	.76
Treatment x year	1.11	1, 12	.31
Attitudes			
Treatment	.48	1, 12	.50
Year	3.96	1, 12	.07*
Treatment x year	.57	1, 12	.47
Practices			
Treatment	1.63	1, 12	.23
Year	.01	1, 12	.94
Treatment x year	.70	1, 12	.42
Grade 1			
Multivariate analysis			
Treatment	.26	3, 10	.85
Year	1.31	3, 10	.32
Treatment x year	1.03	3, 10	.42
Univariate analyses			
Knowledge			
Treatment	.63	1, 12	.44
Year	4.18	1, 12	.06*
Treatment x year	2.98	1, 12	.11
Attitudes			
Treatment	.08	1, 12	.79
Year	.01	1, 12	.97
Treatment x year	.18	1, 12	.68
Practices			
Treatment	.13	1, 12	.72
Year	.38	1, 12	.55
Treatment x year	.34	1, 12	.57
Grade 2			
Multivariate analysis			
Treatment	.74	3, 12	.55
Year	2.06	3, 12	.16
Treatment x year	.79	3, 12	.52
Univariate analyses			
Knowledge			
Treatment	1.07	1, 14	.32
Year	6.57	1, 14	.02*
Treatment x year	1.81	1, 14	.20
Attitudes			
Treatment	2.12	1, 14	.17
Year	.58	1, 14	.46
Treatment x year	.33	1, 14	.58
Practices			
Treatment	.88	1, 14	.36
Year	1.68	1, 14	.22
Treatment x year	.58	1, 14	.46

(Table 10.3, Continued)

Factors/Variables	F	df	p
Grade 3			
Multivariate analysis			
Treatment	.59	3, 12	.63
Year	2.49	3, 12	.11
Treatment x year	.73	3, 12	.55
Univariate analyses			
Knowledge			
Treatment	.79	1, 14	.39
Year	.01	1, 14	.91
Treatment x year	.14	1, 14	.71
Attitudes			
Treatment	.86	1, 14	.37
Year	.97	1, 14	.34
Treatment x year	1.66	1, 14	.22
Practices			
Treatment	1.83	1, 14	.20
Year	4.34	1, 14	.06*
Treatment x year	.12	1, 14	.73
Grade 4			
Multivariate analysis			
Treatment	.14	3, 10	.93
Year	1.63	3, 10	.24
Treatment x year	2.14	3, 10	.16
Univariate analyses			
Knowledge			
Treatment	.21	1, 12	.65
Year	3.37	1, 12	.09*
Treatment x year	2.01	1, 12	.18
Attitudes			
Treatment	.01	1, 12	.98
Year	1.44	1, 12	.25
Treatment x year	7.23	1, 12	.02*
Practices			
Treatment	.03	1, 12	.87
Year	1.59	1, 12	.23
Treatment x year	1.03	1, 12	.33
Grade 5			
Multivariate analysis			
Treatment	.05	3, 12	.98
Year	1.56	3, 12	.25
Treatment x year	1.39	3, 12	.29
Univariate analyses			
Knowledge			
Treatment	.06	1, 14	.81
Year	5.35	1, 14	.04*
Treatment x year	.02	1, 14	.90
Attitudes			
Treatment	.13	1, 14	.72
Year	1.08	1, 14	.32
Treatment x year	.60	1, 14	.45
Practices			
Treatment	.06	1, 14	.81
Year	.85	1, 14	.37
Treatment x year	1.43	1, 14	.25

(Table 10.3, Continued)

Factors/Variables	*F*	*df*	*p*
Grade 6			
Multivariate analysis			
Treatment	1.66	3, 13	.22
Year	9.55	3, 13	.001*
Treatment x year	.66	3, 13	.59
Univariate analyses			
Knowledge			
Treatment	1.45	1, 15	.25
Year	5.11	1, 15	.04*
Treatment x year	.01	1, 15	.97
Attitudes			
Treatment	5.68	1, 15	.03*
Year	.65	1, 15	.43
Treatment x year	.66	1, 15	.43
Practices			
Treatment	.93	1, 15	.35
Year	.32	1, 15	.58
Treatment x year	1.26	1, 15	.28

Note. The unit of analysis was the school for all analyses.

* Statistic meets criterion for significance.

Table 10.4

Means and Standard Deviations for Nutrition Knowledge, Attitudes and Practices of Elementary School Children in Relation to Treatment Group and Year

Year/Variables	Treatment Group			Comparison Group		
	N	$\bar{x}$	SD	N	$\bar{x}$	SD
Kindergarten						
1980						
Knowledge[a]	10	10.18	1.69	4	12.26	3.65
Attitudes[b]	10	1.73	.05	4	1.73	.12
Practices[b]	10	1.66	.05	4	1.70	.08
1981						
Knowledge[a]	10	10.89	2.91	4	10.95	1.71
Attitudes[b]	10	1.76	.05	4	1.80	.05
Practices[b]	10	1.68	.05	4	1.69	.05
Grade 1						
1980						
Knowledge[a]	7	11.87	1.41	7	11.91	2.02
Attitudes[b]	7	1.79	.08	7	1.79	.03
Practices[b]	7	1.69	.10	7	1.68	.02
1981						
Knowledge[a]	7	13.22	1.12	7	12.03	1.87
Attitudes[b]	7	1.80	.07	7	1.78	.01
Practices[b]	7	1.69	.04	7	1.72	.01
Grade 2						
1980						
Knowledge[a]	8	10.48	2.03	8	11.63	1.53
Attitudes[c]	8	2.37	.13	8	2.42	.15
Practices[b]	8	1.66	.08	8	1.67	.06
1981						
Knowledge[a]	8	11.78	.90	8	12.04	1.37
Attitudes[c]	8	2.38	.08	8	2.48	.15
Practices[b]	8	1.62	.03	8	1.66	.08
Grade 3						
1980						
Knowledge[a]	10	13.31	1.39	6	12.81	1.72
Attitudes[c]	10	2.41	.20	6	2.41	.12
Practices[b]	10	1.70	.07	6	1.66	.09
1981						
Knowledge[a]	10	13.49	1.23	6	12.72	2.07
Attitudes[c]	10	2.52	.05	6	2.40	.17
Practices[b]	10	1.76	.48	6	1.74	.09
Grade 4						
1980						
Knowledge[a]	6	9.40	2.25	8	9.63	1.45
Attitudes[d]	6	2.80	.15	8	2.95	.12
Practices[c]	6	2.06	.08	8	2.09	.10
1981						
Knowledge[a]	6	10.86	.86	8	9.82	2.28
Attitudes[d]	6	3.02	.08	8	2.87	.18
Practices[c]	6	2.06	.08	8	2.02	.10
Grade 5						
1980						
Knowledge[a]	9	10.50	2.03	7	10.78	1.51
Attitudes[d]	9	2.92	.13	7	2.91	.18
Practices[c]	9	2.07	.09	7	2.12	.14
1981						
Knowledge[a]	9	11.38	1.82	7	11.57	2.74
Attitudes[d]	9	2.93	.15	7	2.99	.10
Practices[c]	9	2.14	.07	7	2.11	.10

(Table 10.4, Continued)

Grade 6

1980						
Knowledge[a]	8	12.23	1.76	9	11.25	1.64
Attitudes[d]	8	2.99	.06	9	2.93	.11
Practices[c]	8	2.06	.07	9	2.05	.05
1981						
Knowledge[a]	8	13.13	2.35	9	12.18	1.64
Attitudes[d]	8	2.99	.21	9	2.86	.06
Practices[c]	8	2.07	.05	9	2.02	.07

Note. The unit of analysis was the school for all statistics.

[a] Range = 0-20

[b] Range = 1-2

[c] Range = 1-3

[d] Range = 1-4

Table 10.5

Analyses of Covariance for Differences in Nutrition Knowledge, Attitudes, and Practices of Elementary School Children in Treatment and Comparison Groups

Variables	F	df	p
Kindergarten			
Knowledge	.03	1, 11	.86
Attitudes	1.46	1, 11	.25
Practices	.18	1, 11	.68
Grade 1			
Knowledge	5.18	1, 11	.04*
Attitudes	.18	1, 11	.68
Practices	1.29	1, 11	.28
Grade 2			
Knowledge	.27	1, 13	.61
Attitudes	2.16	1, 13	.17
Practices	1.51	1, 13	.24
Grade 3			
Knowledge	.45	1, 13	.52
Attitudes	3.97	1, 13	.07*
Practices	.74	1, 13	.40
Grade 4			
Knowledge	1.98	1, 11	.19
Attitudes	2.11	1, 11	.17
Practices	.77	1, 11	.40
Grade 5			
Knowledge	.01	1, 13	.91
Attitudes	.77	1, 13	.40
Practices	.62	1, 13	.44
Grade 6			
Knowledge	.09	1, 14	.77
Attitudes	3.58	1, 14	.08*
Practices	1.93	1, 14	.19

Note. The unit of analysis was the school for all analyses.

* Statistic meets criterion for significance.

Table 10.6

Analyses of Variance for Differences in Nutrition Knowledge, Attitudes, and Practices of Elementary School Teachers in 1981 in Relation to Treatment Group

Variables	*F*	*df*	*p*
Kindergarten			
Multivariate analysis	1.16	3, 11	.37
Univariate analyses			
Knowledge	.69	1, 13	.50
Attitudes	1.06	1, 13	.31
Practices	1.97	1, 13	.07*
Grade 1			
Multivariate analysis	2.06	3, 12	.16
Univariate analyses			
Knowledge	.92	1, 14	.37
Attitudes	1.47	1, 14	.16
Practices	.12	1, 14	.91
Grade 2			
Multivariate analysis	2.05	3, 12	.16
Univariate analyses			
Knowledge	.93	1, 14	.37
Attitudes	.51	1, 14	.62
Practices	1.40	1, 14	.18
Grade 3			
Multivariate analysis	3.34	3, 10	.06*
Univariate analyses			
Knowledge	.21	1, 12	.84
Attitudes	1.19	1, 12	.26
Practices	2.79	1, 12	.02*
Grade 4			
Multivariate analysis	1.72	3, 7	.25
Univariate analyses			
Knowledge	.68	1, 9	.51
Attitudes	1.41	1, 9	.19
Practices	.25	1, 9	.81
Grade 5			
Multivariate analysis	1.35	3, 8	.33
Univariate analyses			
Knowledge	.93	1, 10	.38
Attitudes	.72	1, 10	.49
Practices	.15	1, 10	.88
Grade 6			
Multivariate analysis	.07	3, 10	.97
Univariate analyses			
Knowledge	.05	1, 12	.96
Attitudes	.42	1, 12	.68
Practices	.46	1, 12	.66
All grades			
Multivariate analysis	.98	3, 90	.40
Univariate analyses			
Knowledge	1.32	1, 93	.19
Attitudes	1.42	1, 92	.16
Practices	1.33	1, 92	.19

Note. The unit of analysis was the individual for all analyses.

* Statistic meets criterion for significance.

Table 10.7

Means and Standard Deviations for Nutrition Knowledge, Attitudes, and Practices of Elementary School Teachers in 1981 in Treatment and Comparison Groups

	Treatment Group			Comparison Group		
	N	$\bar{x}$	SD	N	$\bar{x}$	SD
			Kindergarten			
Knowledge[a]	6	22.50	1.52	9	21.11	4.73
Attitudes[b]	6	3.93	.58	9	4.21	.44
Practices[b]	6	3.20	.45	9	3.60	.34
			Grade 1			
Knowledge[a]	9	22.00	3.77	7	20.14	4.26
Attitudes[b]	9	4.21	.42	7	4.53	.44
Practices[b]	9	3.69	.44	7	3.71	.43
			Grade 2			
Knowledge[a]	8	20.25	3.20	8	21.88	3.76
Attitudes[b]	8	4.06	.51	8	3.85	1.06
Practices[b]	8	3.74	.41	8	3.32	.73
			Grade 3			
Knowledge[a]	7	22.29	4.39	7	21.71	5.82
Attitudes[b]	7	4.39	.32	7	4.09	.58
Practices[b]	7	4.10	.42	7	3.56	.29
			Grade 4			
Knowledge[a]	6	19.00	4.15	5	20.60	3.51
Attitudes[b]	6	4.42	.45	5	4.72	.16
Practices[b]	6	3.78	.69	5	3.70	.25
			Grade 5			
Knowledge[a]	7	20.43	3.69	5	18.20	4.66
Attitudes[b]	7	4.27	.87	5	3.94	.65
Practices[b]	7	3.76	.54	5	3.80	.41
			Grade 6			
Knowledge[a]	5	20.00	4.30	9	20.11	3.30
Attitudes[b]	5	3.98	1.06	9	3.80	.59
Practices[b]	5	3.48	.79	9	3.31	.59
			All grades			
Knowledge[a]	52	21.06	3.95	43	19.79	5.38
Attitudes[b]	52	4.23	.53	42	4.04	.70
Practices[b]	52	3.67	.54	42	3.53	.51

Note. The unit of analysis was the individual for all statistics.

[a] Range = 0-30

[b] Range = 1-5

Table 10.8

Analyses of Variance for Differences in Nutrition Knowledge, Attitudes, and Practices of Elementary School Teachers in Relation to Treatment Group and Year

Factors/Variables	F	df	p
Multivariate analysis			
Treatment	.19	3, 24	.90
Year	1.41	3, 24	.26
Treatment x year	1.72	3, 24	.19
Univariate analyses			
Knowledge			
Treatment	.09	1, 26	.77
Year	1.08	1, 26	.31
Treatment x year	1.99	1, 26	.17
Attitudes			
Treatment	.25	1, 26	.62
Year	.90	1, 26	.35
Treatment x year	1.69	1, 26	.21
Practices			
Treatment	.53	1, 26	.48
Year	.97	1, 26	.33
Treatment x year	2.58	1, 26	.12

Note. The unit of analysis was the school for all analyses.

Table 10.9

Analyses of Covariance for Differences in Nutrition Knowledge, Attitudes, and Practices of Elementary School Teachers in Treatment and Comparison Groups

Variables	F	df	p
Knowledge	1.53	1, 25	.23
Attitudes	1.72	1, 25	.20
Practices	2.05	1, 25	.16

Note. The unit of analysis was the school for all analyses.

Table 10.10

Means and Standard Deviations for Nutrition Knowledge, Attitudes, and Practices of Elementary School Teachers in Relation to Treatment Group and Year

Variables	Treatment Group			Comparison Group		
	N	$\bar{x}$	SD	N	$\bar{x}$	SD
		1980				
Knowledge[a]	15	19.84	1.96	13	20.56	1.50
Attitudes[b]	15	4.18	.35	13	4.20	.37
Practices[b]	15	3.48	.22	13	3.53	.16
		1981				
Knowledge[a]	15	21.55	2.21	13	20.29	5.19
Attitudes[b]	15	4.20	.35	13	4.05	.42
Practices[b]	15	3.66	.40	13	3.49	.33

Note. The unit of analysis was the school for all statistics.

[a] Range = 0–30

[b] Range = 1–5

Table 10.11

Analyses of Variance and Covariance for Differences in Nutrition Knowledge, Attitudes, and Practices of Parents of Elementary School Children in Relation to Treatment Group

Variables	F	df	p
Analyses of Variance			
Multivariate analysis	.15	3, 1,295	.92
Univariate analyses			
Knowledge	.09	1, 1,311	.92
Attitudes	.60	1, 1,301	.55
Practices	.57	1, 1,302	.57
Analyses of Covariance			
Knowledge	.26	1, 21	.62
Attitudes	.50	1, 21	.49
Practices	1.65	1, 21	.21

Note. The unit of analysis was the individual for all analyses.

Table 10.12

Means and Standard Deviations for Nutrition Knowledge, Attitudes, and Practices of Parents of Elementary School Children in 1981 in Treatment and Comparison Groups

Variables	Treatment Group			Comparison Group		
	$\underline{N}$	$\bar{x}$	SD	$\underline{N}$	$\bar{x}$	SD
Knowledge^a	766	12.11	4.33	547	12.13	4.28
Attitudes^b	760	4.24	.53	543	4.22	.52
Practices^b	762	3.90	.41	542	3.89	.44

Note. The unit of analysis was the individual for all statistics.

^{a}Range = 0-25

^{b}Range = 1-5

Table 10.13

Analyses of Variance for Differences in Nutrition Knowledge, Attitudes, and Practices of Parents of Elementary School Children in Relation to Treatment Group and Year

Factors/variables	*F*	df	*p*
Multivariate Analysis			
Treatment	.02	3, 20	.99
Year	3.72	3, 20	.03*
Treatment x year	.70	3, 20	.56
Univariate Analyses			
Knowledge			
Treatment	.06	1, 22	.81
Year	4.37	1, 22	.05*
Treatment x year	.25	1, 22	.62
Attitudes			
Treatment	.01	1, 22	.97
Year	2.41	1, 22	.14
Treatment x year	.72	1, 22	.41
Practices			
Treatment	.02	1, 22	.89
Year	.12	1, 22	.73
Treatment x year	2.06	1, 22	.17

Note. The unit of analysis was the school for all analyses.

*Statistic meets criterion for significance.

Table 10.14

Means and Standard Deviations for Nutrition Knowledge, Attitudes, and Practices of Parents of Elementary School Children in Relation to Treatment Group and Year

Variables	Treatment Group			Comparison Group		
	N	x	SD	N	x	SD
		1980				
Knowledge[a]	11	11.46	1.46	13	11.42	1.87
Attitudes[b]	11	4.26	.10	13	4.29	.17
Practices[b]	11	3.88	.08	13	3.92	.15
		1981				
Knowledge[a]	11	12.12	1.65	13	11.83	2.06
Attitudes[b]	11	4.23	.11	13	4.20	.12
Practices[b]	11	3.93	.12	13	3.89	.08

Note. The unit of analysis was the school for all statistics.

[a] Range = 0-25

[b] Range = 1-5

TABLE 10.15 PERCENTAGE RESPONSES TO PERCEPTION ITEMS ON THE NET STATEWIDE ASSESSMENT

FORM O - PARENTS OF ELEMENTARY STUDENTS (Grades K-6)

ITEM		Response Alternatives				
		Strongly Agree	Mildly Agree	Undecided	Mildly Disagree	Strongly Disagree
(1) I think I understand the purpose of Tennessee's Nutrition Education Training Program (NET).	Control	41	39	16	2	2
	Treatment	43	34	20	2	1
(2) I am satisfied with the school food service program at my child's school.	Control	32	39	12	11	6
	Treatment	35	36	12	11	6
(3) In general, I am satisfied with what I know about nutrition.	Control	34	48	9	6	2
	Treatment	37	44	11	6	2
(4) If the school or community were to offer free programs, workshops, or classes in nutrition, I would like to participate.	Control	23	20	41	8	8
	Treatment	32	19	34	7	8
(5) I am satisfied with what my child is learning about nutrition at school.	Control	31	38	20	7	3
	Treatment	41	37	15	4	3
(6) My child does not like the way the food in the school cafeteria looks.	Control	16	27	12	25	20
	Treatment	15	28	12	22	23
(7) My child thinks it is more fun to eat away from school than in the cafeteria.	Control	31	21	13	18	18
	Treatment	29	19	14	16	23
(8) My child thinks the school lunchroom is not a very nice place to eat.	Control	33	18	8	21	39
	Treatment	12	15	11	22	40
(9) The food in my child's school cafeteria costs too much.	Control	27	17	17	22	31
	Treatment	14	15	18	24	29
(10) My child thinks the line in the school lunchroom is too long.	Control	11	10	21	23	35
	Treatment	9	12	22	24	34

ITEM		Response Alternatives				
		Never	Seldom	Sometimes	Usually	Always
(21) My child participates in the school food service program for breakfast.	Control	71	6	10	7	6
	Treatment	75	4	9	4	9
(22) My child participates in the school food service program for lunch.	Control	13	5	9	23	50
	Treatment	11	4	11	21	52
(23) My child participates in the school food service special milk program.	Control	39	7	11	12	32
	Treatment	37	6	13	11	34
(24) My child takes a lunch to school.	Control	46	18	23	8	5
	Treatment	51	16	21	8	3
(25) My child leaves the school grounds for lunch.	Control	97	1	1	1	<1
	Treatment	97	1	<1	<1	1
(26) My child eats the plate lunch in the school cafeteria.	Control	5	5	13	25	52
	Treatment	3	4	13	25	55
(27) My child eats lunch from the fast food line in the school cafeteria.	Control	78	5	9	2	7
	Treatment	77	4	7	5	7

ITEM		Response Alternatives				
		Never	Seldom	Sometimes	Usually	Always
(28) My child eats lunch from the salad bar in the school cafeteria.	Control	81	3	12	1	2
	Treatment	87	3	6	2	2
(29) My child eats lunch from the Coke and candy machines at school.	Control	94	3	2	0	1
	Treatment	94	3	3	<1	1
(30) My child skips lunch.	Control	91	6	3	0	1
	Treatment	88	6	5	<1	1
(31) If I had time, I would help in planning school menus.	Control	33	13	48	6	11
	Treatment	22	11	51	8	9
(32) If I had time, I would help make posters and decorations for the school cafeteria.	Control	19	14	54	6	8
	Treatment	10	11	54	7	7
(33) If I had time, I would take turns with others parents eating lunch with the children in the school cafeteria.	Control	8	9	60	9	14
	Treatment	11	8	57	10	14
(34) If I had time, I would help with a tasting party for the children at school.	Control	14	8	54	11	13
	Treatment	11	7	55	12	15

RESPONSE	Control		Treatment	
	Yes	No	Yes	No
(1) Serve more different kinds of foods.	83	17	85	15
(2) Give students more choices (for example, salad bar, different kinds of drinks, different kinds of desserts).	65	35	68	32
(3) Serve better tasting food.	76	24	74	26
(4) Give bigger servings on the plate.	46	54	49	51
(5) Students should be able to help plan meals and ways of doing things in the cafeteria.	56	44	51	49
(6) Service should be faster.	34	66	33	67
(7) Food prices should be lower.	51	49	56	44

TABLE 10.16 PERCENTAGE RESPONSES TO PERCEPTION ITEMS ON THE NET STATEWIDE ASSESSMENT

FORM O - PARENTS OF SECONDARY STUDENTS (Grades 7-12)

RESPONSE	RESPONSE ALTERNATIVES				
	Strongly Agree	Mildly Agree	Undecided	Strongly Disagree	Strongly Disagree
(1) I think I understand the Purpose of Tennessee's Nutrition Education Training Program (NET).	28	43	23	3	3
(2) I am satisfied with the school food service program at my child's school.	15	36	16	17	16
(3) In general, I am satisfied with what I know about nutrition.	28	49	13	8	3
(4) If the school or community were to offer free programs, workshops, or classes in nutrition, I would like to participate.	22	18	43	10	7
(5) I am satisfied with what my child is learning about nutrition at school.	27	36	18	13	6
(6) My child does not like the way the food in the school cafeteria looks.	28	32	13	17	10
(7) My child thinks it is more fun to eat away from school than in the cafeteria.	48	22	13	8	10
(8) My child thinks the school lunchroom is not a very nice place to eat.	18	22	15	21	23
(9) The food in my child's school cafeteria costs too much.	22	21	20	23	14
(10) My child thinks the line in the school lunchroom is too long.	27	16	18	25	15

RESPONSE	RESPONSE ALTERNATIVES				
	Never	Seldom	Sometimes	Usually	Always
(21) My child participates in the school food service program for breakfast.	87	4	4	2	3
(22) My child participates in the school food service program for lunch.	25	4	11	25	36
(23) My child participates in the school food service special milk program.	63	5	10	10	12
(24) My child takes a lunch to school.	48	22	22	2	6
(25) My child leaves the school grounds for lunch.	88	6	3	2	2
(26) My child eats the plate lunch in the school cafeteria.	13	7	22	24	35
(27) My child eats lunch from the fast food line in the school cafeteria.	61	7	17	7	8

RESPONSE	RESPONSE ALTERNATIVES				
	Never	Seldom	Sometimes	Usually	Always
(28) My child eats lunch from the salad bar in the school cafeteria.	72	8	16	4	<1
(29) My child eats lunch from the Coke and candy machines at school.	73	11	11	4	2
(30) My child skips lunch.	52	16	24	5	3
(31) If I had time, I would help in planning school menus.	25	12	48	5	10
(32) If I had time, I would help make posters and decorations for the school cafeteria.	32	15	41	4	8
(33) If I had time, I would take turns with other parents eating lunch with the children in the school cafeteria.	18	12	52	8	9
(34) If I had time, I would help with a tasting party for the children at school.	23	10	48	7	12

RESPONSE	Control	
	Yes	No
(1) Serve more different kinds of foods.	91	9
(2) Give students more choices (for example, salad bar, different kinds of drinks, different kinds of desserts).	88	12
(3) Serve better tasting food.	90	10
(4) Give bigger servings on the plate.	71	29
(5) Students should be able to help plan meals and ways of doing things in the cafeteria.	73	27
(6) Service should be faster.	60	40
(7) Food prices should be lower.	63	37

TABLE 10.17 PERCENTAGE RESPONSES TO PERCEPTION ITEMS ON THE NET STATEWIDE ASSESSMENT

FORM 1 - ELEMENTARY TEACHERS (Grades K-6)

ITEM		Response Alternatives				
		Strongly Disagree	Mildly Disagree	Undecided	Mildly Agree	Strongly Agree
(1) I understand the purposes and in-school activities of Tennessee's Nutrition Education and Training (NET) Program.	Control	0	14	17	40	29
	Treatment	0	6	4	31	60
(2) In general, I am satisfied with the extent of my knowledge about nutrition.	Control	0	17	10	60	14
	Treatment	0	17	8	56	19
(3) The undergraduate curriculum for all prospective teachers should include nutrition education.	Control	5	5	2	31	57
	Treatment	0	4	8	25	63
(4) I am satisfied with the food service program in my school.	Control	19	12	10	36	24
	Treatment	12	21	13	29	25
(5) School food service personnel should be responsible for planning the food service program in the school.	Control	14	10	12	36	29
	Treatment	4	12	17	29	38
(6) School administrators should be involved in planning the school food service program.	Control	21	12	10	40	17
	Treatment	11	8	15	44	21
(7) Teachers should be involved in planning the school food service program.	Control	24	12	7	32	24
	Treatment	13	13	13	35	25

ITEM		Response Alternatives				
		Strongly Disagree	Mildly Disagree	Undecided	Mildly Agree	Strongly Agree
(8) Students should be involved in planning the school food service program.	Control	19	14	19	33	14
	Treatment	10	10	13	46	21
(9) Parents should be involved in planning the school food service program.	Control	21	14	19	38	7
	Treatment	25	17	15	33	10
(10) I would attend a nutrition training course offered in the summer by the State Department of Education (college credit available at my expense).	Control	36	5	43	7	10
	Treatment	29	12	29	19	12
(11) I would attend a nutrition training course offered in this area by the State Department of Education during the year (college credit available at my expense).	Control	29	14	40	12	5
	Treatment	37	12	25	19	8
(12) I would attend a nutrition training course provided by the State Department of Education as a noncredit workshop taught in this area during the year (inservice credit available).	Control	14	5	14	43	24
	Treatment	10	6	6	38	40
(13) I would attend a nutrition training course provided by the State Department of Education as a noncredit workshop in the summer (inservice credit available).	Control	17	10	21	33	19
	Treatment	16	2	12	29	41
(14) Having Coke and candy machines in a school discourages children from eating balanced meals.	Control	5	5	5	21	64
	Treatment	6	6	6	25	58

ITEM		Response Alternatives				
		Never	Seldom	Sometimes	Usually	Always
(25) I eat the school lunch as provided for the children in my school.	Control	7	17	26	29	21
	Treatment	10	25	25	24	16
(26) I have included nutrition in my classroom instructional activities this year.	Control	2	7	19	29	43
	Treatment	0	6	33	21	40
(27) I have involved children from my classes in the food service program of the school this year (e.g., offering opinions about foods, making posters for display in the lunchroom).	Control	21	26	24	17	12
	Treatment	21	10	29	23	17
(28) If the State Department of Education provided a guide for the teaching of nutrition as part of existing subject matter, I would use it in teaching my classes.	Control	5	2	14	38	40
	Treatment	0	4	15	42	38
(29) School food service personnel are responsible for planning the food service program in my school.	Control	12	2	10	27	49
	Treatment	2	4	6	23	65
(30) School administrators are involved in planning the food service program in my school.	Control	37	20	24	7	12
	Treatment	31	27	29	8	4
(31) Teachers are involved in planning the food service program in my school.	Control	62	19	10	7	2
	Treatment	65	21	13	0	0
(32) Students are involved in planning the food service program in my school.	Control	52	24	12	10	2
	Treatment	69	21	10	0	0
(33) Parents are involved in planning the food service program in my school.	Control	74	12	7	5	2
	Treatment	88	8	4	0	0

RESPONSE	Control		Treatment	
	Yes	No	Yes	No
(1) Serve more different kinds of foods.	83	17	83	17
(2) Give students more choices (for example, salad bar, different kinds of drinks, different kinds of desserts).	73	27	71	29
(3) Serve better tasting food.	69	31	66	34
(4) Give bigger servings on the plate.	70	30	51	49
(5) Students should be able to help plan meals and ways of doing things in the cafeteria.	69	31	53	47
(6) Service should be faster.	22	78	12	88
(7) Food prices should be lower.	38	62	23	77

TABLE 10.18 PERCENTAGE RESPONSES TO PERCEPTION ITEMS ON THE NET STATEWIDE ASSESSMENT

FORM 2 - SECONDARY TEACHERS (Grades 7-12)

ITEM	Response Alternatives				
	Strongly Disagree	Mildly Disagree	Undecided	Mildly Agree	Strongly Agree
(1) I understand the purposes and in-school activities of Tennessee's Nutrition Education and Training (NET) Program.	0	8	23	23	46
(2) In general, I am satisfied with the extent of my knowledge about nutrition.	4	23	8	50	15
(3) The undergraduate curriculum for all prospective teachers should include nutrition education.	4	8	12	19	58
(4) I am satisfied with the food service program in my school.	12	4	12	54	19
(5) School food service personnel should be responsible for planning the food service program in the school.	8	12	15	38	27
(6) School administrators should be involved in planning the school food service program.	12	20	28	24	16
(7) Teachers should be involved in planning the school food service program.	5	27	8	25	15

ITEM	Response Alternatives				
	Strongly Disagree	Mildly Disagree	Undecided	Mildly Agree	Strongly Agree
(8) Students should be involved in planning the school food service program.	0	27	4	46	23
(9) Parents should be involved in planning the school food service program.	27	19	27	19	7
(10) I would attend a nutrition training course offered in the summer by the State Department of Education (college credit available at my expense).	31	15	42	4	8
(11) I would attend a nutrition training course offered in this area by the State Department of Education during the year (college credit available at my expense).	27	19	23	23	8
(12) I would attend a nutrition training course provided by the State Department of Education as a noncredit workshop taught in this area during the year (inservice credit available).	12	19	15	27	27
(13) I would attend a nutrition training course provided by the State Department of Education as a noncredit workshop in the summer (inservice credit available).	19	23	23	27	8
(14) Having Coke and candy machines in a school discourages the children from eating balanced meals.	4	15	0	31	50

ITEM	Response Alternatives				
	Never	Seldom	Sometimes	Usually	Always
(25) I eat the school lunch as provided for the students in my school.	15	15	19	23	27
(26) I have included nutrition in my classroom instructional activities this year.	23	15	19	27	15
(27) I have involved students from my classes in the food service program of the school this year (e.g., offering opinions about foods, making posters for display in the lunchroom).	54	15	23	4	0
(28) If the State Department of Education provided a guide for the teaching of nutrition as part of existing subject matter, I would use it in teaching my classes.	15	15	27	27	15
(29) School food service personnel are responsible for planning the food service program in my school.	0	12	4	42	42
(30) School administrators are involved in planning the food service program in my school.	42	12	23	15	8
(31) Teachers are involved in planning the food service program in my school.	65	23	8	4	0
(32) Students are involved in planning the food service program in my school.	58	23	15	4	0
(33) Parents are involved in planning the food service program in my school.	88	4	4	4	0

RESPONSE	Control	
	Yes	No
(1) Serve more different kinds of foods.	91	9
(2) Give students more choices (for example, salad bar, different kinds of drinks, different kinds of desserts).	78	22
(3) Serve better tasting food.	64	36
(4) Give bigger servings on the plate.	38	62
(5) Students should be able to help plan meals and ways of doing things in the cafeteria.	77	23
(6) Service should be faster.	48	52
(7) Food prices should be lower.	32	68

TABLE 10.19 PERCENTAGE RESPONSES TO PERCEPTION ITEMS ON THE NET STATEWIDE ASSESSMENT

FORM 3 - FOOD SERVICE PERSONNEL SERVING GRADES K-6

ITEM		Response Alternatives				
		Strongly Disagree	Mildly Disagree	Undecided	Mildly Agree	Strongly Agree
(1) In general, I am satisfied with the extent of my knowledge about nutrition.	Control	2	16	2	67	14
	Treatment	17	15	8	49	11
(2) In general, I am satisfied that the other food service workers in my school know enough about nutrition.	Control	6	20	10	53	12
	Treatment	6	26	15	40	13
(3) I am satisfied with the food service program in my school.	Control	6	14	0	31	49
	Treatment	2	4	4	35	55
(4) School food service personnel should be responsible for planning the food service program in the school.	Control	2	10	22	33	33
	Treatment	6	6	4	33	52
(5) School administrators should be involved in planning the school food service program.	Control	20	18	14	33	14
	Treatment	17	17	19	23	23
(6) Teachers should be involved in planning the school food service program.	Control	37	33	11	18	2
	Treatment	26	20	17	19	19
(7) Students should be involved in planning the school food service program.	Control	16	12	8	32	32
	Treatment	6	13	11	43	28

ITEM		Response Alternatives				
		Strongly Disagree	Mildly Disagree	Undecided	Mildly Agree	Strongly Agree
(8) Parents should be involved in planning the school food service program.	Control	50	8	8	26	8
	Treatment	41	31	7	17	4
(9) I would attend a nutrition training course offered in the summer by the State Department of Education (college credit available at my own expense).	Control	14	22	41	16	6
	Treatment	30	6	35	13	17
(10) I would attend a nutrition training course offered in this area during the year by the State Department of Education (college credit available at my own expense).	Control	19	8	44	17	13
	Treatment	24	15	33	15	13
(11) I would attend a nutrition training course provided by the State Department of Education as a noncredit workshop taught in this area during the year (inservice credit available).	Control	8	4	35	31	22
	Treatment	11	19	26	28	17
(12) I would attend a nutrition training course provided by the State Department of Education as a noncredit workshop in the summer (inservice credit available).	Control	6	14	31	31	18
	Treatment	13	13	28	30	15
(13) The Youth Advisory Council (YAC) is a good means of involving students in the school lunch program.	Control	0	4	10	51	35
	Treatment	9	6	17	28	41
	Control					
	Treatment					

ITEM		Response Alternatives				
		Never	Seldom	Sometimes	Usually	Always
(34) Students in my school are encouraged to suggest menu items.	Control	[illegible]	13	40	8	21
	Treatment	23	9	51	9	8
(35) Students in my school make posters for the cafeteria.	Control	34	22	26	8	10
	Treatment	15	25	36	13	11
(36) Students in my school serve on taste panels.	Control	81	4	13	2	0
	Treatment	53	23	23	2	0
(37) Students in my school are encouraged to suggest lunchroom policies or food service procedures.	Control	56	10	31	0	2
	Treatment	51	13	32	4	0
(38) Students' opinions are considered in deciding what foods will be served in the food service program in my school.	Control	24	16	41	8	10
	Treatment	23	21	38	17	2
(39) Students in my school volunteer (unpaid) to help clean the cafeteria.	Control	63	2	8	2	24
	Treatment	40	8	25	17	11
(40) Students in my school volunteer (unpaid) to help in food preparation.	Control	90	2	0	0	8
	Treatment	74	9	8	2	8

ITEM		Response Alternatives				
		Never	Seldom	Sometimes	Usually	Always
(41) Students in my school do special studies related to the school food service program (e.g., plate waste studies).	Control	52	19	27	2	0
	Treatment	67	13	13	2	6
(42) I assist the teachers in my school in teaching nutrition.	Control	69	18	10	2	0
	Treatment	70	8	17	2	4
(43) School food service personnel are responsible for planning the food service program in my school.	Control	13	4	31	10	42
	Treatment	26	6	13	17	38
(44) School administrators are involved in planning the food service program in my school.	Control	42	8	13	25	13
	Treatment	58	13	15	6	8
(45) Teachers are involved in planning the food service program in my school.	Control	57	21	17	4	0
	Treatment	74	9	11	4	2
(46) Students are involved in planning the food service program in my school.	Control	40	21	36	2	0
	Treatment	46	22	30	2	0
(47) Parents are involved in planning the food service program in my school.	Control	77	6	6	8	2
	Treatment	83	11	6	0	0

RESPONSE	Control		Treatment	
	Yes	No	Yes	No
(1) Serve more different kinds of foods.	64	36	64	36
(2) Give students more choices (for example, salad bar, different kinds of drinks, different kinds of desserts).	34	66	46	54
(3) Serve better tasting food.	50	50	46	64
(4) Give bigger servings on the plate.	36	64	35	65
(5) Students should be able to help plan meals and ways of doing things in the cafeteria.	69	31	46	54
(6) Service should be faster.	24	76	26	74
(7) Food prices should be lower.	58	42	64	36

TABLE 10.20 PERCENTAGE RESPONSES TO PERCEPTION ITEMS ON THE NET STATEWIDE ASSESSMENT

FORM 3 - FOOD SERVICE PERSONNEL SERVING GRADES 7-12

RESPONSE	RESPONSE ALTERNATIVES				
	Strongly Disagree	Mildly Disagree	Undecided	Mildly Agree	Strongly Agree
(1) In general, I am satisfied with the extent of my knowledge about nutrition.	15	23	0	46	15
(2) In general, I am satisfied that the other food service workers in my school know enough about nutrition.	38	8	15	15	23
(3) I am satisfied with the food service program in my school.	8	31	0	31	31
(4) School food service personnel should be responsible for planning the food service program in the school.	8	8	8	23	54
(5) School administrators should be involved in planning the school food service program.	15	23	0	23	38
(6) Teachers should be involved in planning the school food service program.	33	8	0	25	33
(7) Students should be involved in planning the school food service program.	8	0	0	33	58

RESPONSE	RESPONSE ALTERNATIVES				
	Strongly Disagree	Mildly Disagree	Undecided	Mildly Agree	Strongly Agree
(8) Parents should be involved in planning the school food service program.	38	0	0	23	38
(9) I would attend a nutrition training course offered in the summer by the State Department of Education (college credit available at my own expense).	8	0	15	38	38
(10) I would attend a nutrition training course offered in this area during the year by the State Department of Education (college credit available at my own expense).	31	0	15	46	8
(11) I would attend a nutrition training course provided by the State Department of Education as a noncredit workshop taught in this area during the year (inservice credit available).	0	0	17	25	58
(12) I would attend a nutrition training course provided by the State Department of Education as a noncredit workshop in the summer (inservice credit available).	8	0	15	62	15
(13) The Youth Advisory Council (YAC) is a good means of involving students in the school lunch program.	0	0	8	0	92

RESPONSE	RESPONSE ALTERNATIVES				
	Never	Seldom	Sometimes	Usually	Always
(34) Students in my school are encouraged to suggest menu items.	25	0	33	33	8
(35) Students in my school make posters for the cafeteria.	38	0	8	31	23
(36) Students in my school serve on taste panels.	8	8	38	23	23
(37) Students in my school are encouraged to suggest lunchroom policies or food service procedures.	8	0	15	62	15
(38) Students' opinions are considered in deciding what foods will be served in the food service program in my school.	0	7	23	31	38
(39) Students in my school volunteer (unpaid) to help clean the cafeteria.	46	15	8	31	0
(40) Students in my school volunteer (unpaid) to help in food preparation.	69	0	0	23	8

RESPONSE	RESPONSE ALTERNATIVES				
	Never	Seldom	Sometimes	Usually	Always
(41) Students in my school do special studies related to the school food service program (e.g., plate waste studies).	33	17	17	25	8
(42) I assist the teachers in my school in teaching nutrition.	46	8	15	31	0
(43) School food service personnel are responsible for planning the food service program in my school.	0	8	17	33	42
(44) School administrators are involved in planning the food service program in my school.	38	0	15	46	0
(45) Teachers are involved in planning the food service program in my school.	62	8	0	23	8
(46) Students are involved in planning the food service program in my school.	15	23	31	23	8
(47) Parents are involved in planning the food service program in my school.	38	31	0	31	0

RESPONSE	Control	
	Yes	No
(1) Serve more different kinds of foods.	25	75
(2) Give students more choices (for example, salad bar, different kinds of drinks, different kinds of desserts).	20	80
(3) Serve better tasting food.	0	100
(4) Give bigger servings on the plate.	20	80
(5) Students should be able to help plan meals and ways of doing things in the cafeteria.	75	25
(6) Service should be faster.	43	57
(7) Food prices should be lower.	100	0

TABLE 10.21 PERCENTAGE RESPONSES TO PERCEPTION ITEMS ON THE NET STATEWIDE ASSESSMENT

FORM 4 - ADMINISTRATORS OF STUDENTS GRADES K-6

ITEM		Response Alternatives				
		Strongly Disagree	Mildly Disagree	Undecided	Mildly Agree	Strongly Agree
(1) I understand the purposes and in-school activities of Tennessee' Nutrition Education and Training (NET) Program.	Control	0	0	23	38	38
	Treatment	0	7	0	29	64
(2) In general, I am satisfied that the teachers in my school know enough about nutrition.	Control	0	38	23	31	8
	Treatment	7	0	7	64	21
(3) The undergraduate curriculum for all prospective teachers should include nutrition education.	Control	0	0	8	31	62
	Treatment	0	0	0	50	50
(4) I am satisfied with the food service program in my school.	Control	8	15	8	38	31
	Treatment	14	0	0	43	43
(5) The school breakfast program is appropriate to offer the students in my school.	Control	25	0	25	17	33
	Treatment	23	15	8	8	46
(6) The teachers in my school teach nutrition in some form.	Control	0	0	0	46	54
	Treatment	0	0	0	71	29
(7) School food service personnel should be responsible for planning the food service program in the school.	Control	31	8	8	46	8
	Treatment	0	14	14	50	21
(8) School administrators should be involved in planning the school food service program.	Control	0	0	8	15	77
	Treatment	7	7	21	36	29

ITEM		Response Alternatives				
		Strongly Disagree	Mildly Disagree	Undecided	Mildly Agree	Strongly Agree
(9) Teachers should be involved in planning the school food service program.	Control	0	8	15	38	38
	Treatment	7	7	29	21	36
(10) Students should be involved in planning the school food service program.	Control	8	8	15	31	38
	Treatment	7	7	21	50	14
(11) Parents should be involved in planning the school food service program.	Control	15	23	8	46	8
	Treatment	21	14	14	29	21
(12) The teachers in my school would attend a nutrition training course offered in the summer by the State Department of Education (college credit available at the teachers' expense).	Control	8	15	54	15	8
	Treatment	0	14	36	36	14
(13) The teachers in my school would attend a nutrition training course offered in this area by the State Dept. of Education during the year (college credit available at teachers' expense).	Control	15	0	54	23	8
	Treatment	0	7	36	50	7
(14) The teachers in my school would attend a nutrition training course provided by the State Dept. of Education as a non-credit workshop taught in this area during the year (inservice credit available).	Control	0	0	46	38	15
	Treatment	0	7	14	50	29
(15) The teachers in my school would attend a nutrition training course provided by the State Dept. of Education as a non-credit workshop in the summer (inservice credit available).	Control	8	0	50	17	25
	Treatment	0	14	14	50	21

ITEM		Response Alternatives				
		Never	Seldom	Sometimes	Usually	Always
(31) I eat the school lunch as provided for the students in my school.	Control	8	8	8	31	46
	Treatment	0	43	7	14	36
(32) If the State Department of Education provided a guide for the teaching of nutrition as part of existing subject matter, teachers in my school would use it in teaching their classes.	Control	0	8	46	31	15
	Treatment	0	0	21	57	21
(33) Students in my school are encouraged to suggest menu items.	Control	15	23	31	31	0
	Treatment	21	14	57	7	0
(34) Students in my school make posters for the cafeteria.	Control	15	31	38	15	0
	Treatment	0	43	36	21	0
(35) Students in my school serve on taste panels.	Control	77	15	0	0	8
	Treatment	29	50	21	0	0
(36) Students in my school are encouraged to suggest lunchroom policies or food service procedures.	Control	54	38	0	8	0
	Treatment	29	50	21	0	0
(37) Students' opinions are considered in deciding what foods will be served in the food service program in my school.	Control	23	8	31	38	0
	Treatment	29	36	7	29	0
(38) Students in my school volunteer (unpaid) to help clean the cafeteria.	Control	38	0	23	15	23
	Treatment	43	0	29	21	7

ITEM		Response Alternatives				
		Never	Seldom	Sometimes	Usually	Always
(39) Students in my school volunteer (unpaid) to help in food preparation.	Control	85	8	8	0	0
	Treatment	86	0	7	7	0
(40) Students in my school do special studies related to the school food service program (e.g., plate waste studies).	Control	46	23	31	0	0
	Treatment	50	36	14	0	0
(41) School food service personnel are responsible for planning the food service program in my school.	Control	0	23	0	46	31
	Treatment	0	0	0	36	64
(42) School administrators are involved in planning the food service program in my school.	Control	23	23	31	0	23
	Treatment	43	14	21	21	0
(43) Teachers are involved in planning the food service program in my school.	Control	31	23	23	15	8
	Treatment	36	29	36	0	0
(44) Students are involved in planning the food service program in my school.	Control	31	31	15	23	0
	Treatment	43	29	29	0	0
(45) Parents are involved in planning the food service program in my school.	Control	62	23	8	8	0
	Treatment	57	21	21	0	0

RESPONSE	Control		Treatment	
	Yes	No	Yes	No
(1) Serve more different kinds of foods.	75	25	82	18
(2) Give students more choices (for example, salad bar, different kinds of drinks, different kinds of desserts).	58	42	64	36
(3) Serve better tasting food.	55	45	70	30
(4) Give bigger servings on the plate.	67	33	30	70
(5) Students should be able to help plan meals and ways of doing things in the cafeteria.	67	33	70	30
(6) Service should be faster.	25	75	10	90
(7) Food prices should be lower.	36	64	20	80

TABLE 10.22 PERCENTAGE RESPONSES TO PERCEPTION ITEMS ON THE NET STATEWIDE ASSESSMENT

FORM 4 - ADMINISTRATORS OF STUDENTS GRADES 7-12

RESPONSE	RESPONSE ALTERNATIVES				
	Strongly Disagree	Mildly Disagree	Undecided	Mildly Agree	Strongly Agree
(1) I understand the purposes and in-school activities of Tennessee's Nutrition Education and Training (NET) Program.	0	17	0	50	33
(2) In general, I am satisfied that the teachers in my school know enough about nutrition.	0	33	17	33	17
(3) The undergraduate curriculum for all prospective teachers should include nutrition education.	17	17	17	0	50
(4) I am satisfied with the food service program in my school.	17	0	0	33	50
(5) The school breakfast program is appropriate to offer the students in my school.	67	17	0	17	0
(6) The teachers in my school teach nutrition in some form.	17	0	0	50	33
(7) School food service personnel should be responsible for planning the food service program in the school.	17	33	0	33	17

RESPONSE	RESPONSE ALTERNATIVES				
	Strongly Disagree	Mildly Disagree	Undecided	Mildly Agree	Strongly Agree
(8) School administrators should be involved in planning the school food service program.	0	17	0	50	33
(9) Teachers should be involved in planning the school food service program.	0	17	17	33	33
(10) Students should be involved in planning the school food service program.	0	0	33	50	17
(11) Parents should be involved in planning the school food service program.	0	0	33	50	17
(12) The teachers in my school would attend a nutrition training course offered in the summer by the State Department of Education (college credit available at the teachers' expense).	0	17	67	0	17
(13) The teachers in my school would attend a nutrition training course offered in this area by the State Department of Education during the year (college credit availabe at teachers' expense).	0	0	67	17	17
(14) The teachers in my school would attend a nutrition training course provided by the State Department of Education as a non-credit workshop taught in this area during the year (inservice credit available).	0	17	33	33	17
(15) The teachers in my school would attend a nutrition training course provided by the State Department of Education as a non-credit workshop in the summer (inservice credit available).	17	33	33	0	17

RESPONSE	RESPONSE ALTERNATIVES				
	Never	Seldom	Sometimes	Usually	Always
(31) I eat the school lunch as provided for the students in my school.	0	0	0	17	83
(32) If the State Department of Education provided a guide for the teaching of nutrition as part of existing subject matter, teachers in my school would use it in teaching their classes.	0	0	0	50	50
(33) Students in my school are encouraged to suggest menu items.	0	17	17	67	0
(34) Students in my school make posters for the cafeteria.	17	33	17	33	0
(35) Students in my school service on taste panels.	50	50	0	0	0
(36) Students in my school are encouraged to suggest lunchroom policies or food service procedures.	17	17	33	33	0
(37) Students' opinions are considered in deciding what foods will be served in the food service program in my school.	0	17	17	33	33

RESPONSE	RESPONSE ALTERNATIVES				
	Never	Seldom	Sometimes	Usually	Always
(38) Students in my school volunteer (unpaid) to help clean the cafeteria.	17	17	33	17	17
(39) Students in my school volunteer (unpaid) to help in food preparation.	67	17	0	17	17
(40) Students in my school do special studies related to the school food service program (e.g., plate waste studies).	17	33	50	0	0
(41) School food service personnel are responsible for planning the food service program in my school.	0	17	0	33	50
(42) School administrators are involved in planning the food service program in my school.	0	33	33	17	17
(43) Teachers are involved in planning the food service program in my school.	3	6	9	0	0
(44) Students are involved in planning the food service program in my school.	17	17	50	17	0
(45) Parents are involved in planning the food service program in my school.	50	17	33	0	0

RESPONSE	Control	
	Yes	No
(1) Serve more different kinds of foods.	33	67
(2) Give students more choices (for example, salad bar, different kinds of drinks, different kinds of desserts).	67	33
(3) Serve better tasting food.	50	50
(4) Give bigger servings on the plate.	17	83
(5) Students should be able to help plan meals and ways of doing things in the cafeteria.	67	33
(6) Service should be faster.	67	33
(7) Food prices should be lower.	17	83

TABLE 10.23 PERCENTAGE RESPONSES TO PERCEPTION ITEMS ON THE NET STATEWIDE ASSESSMENT

FORM 5 - STUDENTS (Grades 10-12)

ITEM	Strongly Disagree			Mildly Disagree			Undecided			Mildly Agree			Strongly Agree		
	10 th	11 th	12 th	10 th	11 th	12 th	10 th	11 th	12 th	10th	11th	12th	10th	11th	12th
(1) I like the quality and variety of food and the way it is served in the food service program in my school.	16	28	22	33	21	30	11	13	10	36	33	33	4	5	4
(2) The food in the cafeteria at school does not look very good.	6	7	7	31	23	31	16	10	9	29	35	33	18	25	19
(3) The food in the school cafeteria costs too much.	14	13	27	16	16	18	20	21	16	20	15	18	30	35	21
(4) It is more fun to eat away from school than to eat in the cafeteria.	3	5	1	3	2	6	7	10	6	13	15	4	74	68	82
(5) The cafeteria at my school is not a nice place to eat.	24	18	22	35	27	36	14	18	15	14	21	10	13	16	16
(6) The line in the cafeteria at my school is usually too long.	12	9	7	10	13	10	7	8	7	17	24	18	54	47	57
(7) I like to help decide what foods will be fixed for lunch at my school.	9	8	18	9	8	4	24	20	22	20	23	13	38	41	42

ITEM	Never			Seldom			Sometimes			Usually			Always		
	10th	11th	12 th	10 th	11 th	12 th	10th	11 th	12th	10 th	11 th	12 th	10th	11 th	12th
(18) I eat the plate lunch served in the cafeteria at my school.	12	10	18	18	12	21	26	21	24	29	36	25	15	21	12
(19) I eat foods from the fast food line in the cafeteria at my school.	43	47	46	18	16	22	25	14	21	8	18	6	6	4	4
(20) I eat foods from the salad bar in the cafeteria at my school.	61	45	58	15	13	15	14	27	19	8	12	1	2	3	6
(21) I buy the foods I eat for lunch from the Coke and candy machines at my school.	40	42	38	22	24	23	30	18	21	6	10	12	2	6	6
(22) I bring my lunch and eat at school.	69	72	58	21	14	19	3	11	15	1	1	3	6	2	4
(23) I eat my lunch at home.	77	82	67	9	7	10	12	4	12	1	3	6	1	4	4

ITEM	Never			Seldom			Sometimes			Usually			Always		
	10 th	11 th	12 th	10 th	11 th	12 th	10 th	11 th	12 th	10 th	11 th	12 th	10 th	11th	12th
(24) I eat lunch at a store or restaurant away from my school.	58	61	48	19	17	12	15	16	28	6	4	10	2	2	1
(25) Students at my school participate in a Youth Advisory Council (YAC) or other organization that helps plan school lunches.	72	81	58	6	1	7	9	7	6	3	4	9	10	7	19
(26) I help decide what foods will be served for lunch at my school.	94	94	88	5	4	6	0	0	6	1	1	0	0	1	0
(27) I learn at school about foods that are good for me.	33	36	37	22	18	16	23	32	22	16	8	21	6	6	3

RESPONSE	Tenth Grade		Eleventh Grade		Twelfth Grade	
	Yes	No	Yes	No	Yes	No
(1) Serve more different kinds of foods.	93	7	94	6	95	5
(2) Give students more choices (for example, salad bar, different kinds of drinks, different kinds of desserts).	97	3	94	6	98	2
(3) Serve better tasting food.	94	6	90	10	90	10
(4) Give bigger servings on the plate.	73	27	84	16	85	15
(5) Students should be able to help plan meals and ways of doing things in the cafeteria.	77	23	68	32	81	19
(6) Service should be faster.	82	18	74	26	83	17
(7) Food prices should be lower.	76	24	74	26	65	35

TABLE 10.24 PERCENTAGE RESPONSES TO PERCEPTION ITEMS ON THE NET STATEWIDE ASSESSMENT

FORM 6 - STUDENTS (Grades 7-9)

ITEM	Strongly Disagree			Mildly Disagree			Undecided			Mildly Agree			Stongly Agree		
	7th	8 th	9 th	7 th	8 th	9 th	7 th	8 th	9 th	7 th	8 th	9 th	7 th	8th	9th
(1) I like the quality and variety of food and the way it is served in the food service program at my school.	28	31	20	26	25	26	14	10	17	27	30	30	6	4	6
(2) The food in the cafeteria at school does not look very good.	14	16	8	22	25	15	14	10	17	27	26	35	24	23	25
(3) The food in the school cafeteria costs too much.	14	15	10	18	19	15	19	19	20	17	17	19	32	29	37
(4) It is more fun to eat away from school than to eat in the cafeter[illegible]	9	8	5	7	7	6	11	9	6	12	13	15	61	62	68
(5) The cafeteria at my school is not a nice place to eat.	39	26	20	22	19	29	14	19	17	10	21	17	15	15	17
(6) The line in the cafeteria at my school is usually too long.	11	12	12	15	16	17	10	14	7	20	17	17	44	40	46
(7) I like to help decide what foods will be fixed for lunch at my school.	8	6	9	5	5	7	17	16	22	12	18	17	58	54	44

ITEM	Never			Seldom			Sometimes			Usually			Never		
	7 th	8 th	9th	7 th	8 th	9 th	7 th	8 th	9 th	7 th	8 th	9 th	7 th	8 th	9 th
(18) I eat the plate lunch served in the cafeteria at my school.	9	6	7	10	7	14	19	22	21	23	29	33	39	35	25
(19) I eat foods from the fast food line in the cafeteria at my school.	50	45	51	10	8	9	17	25	18	15	13	15	8	9	7
(20) I eat foods from the salad bar in the cafeteria at my school.	73	62	57	12	12	13	9	15	21	3	6	6	3	4	2
(21) I buy the foods I eat for lunch from the Coke and candy machines at my school.	83	69	64	4	9	11	8	13	16	1	4	5	4	5	4
(22) I bring my lunch and eat at school.	55	55	72	19	18	12	19	21	11	4	4	2	4	1	3
(23) I eat my lunch at home.	74	68	74	8	14	7	8	11	12	4	3	3	6	4	4

ITEM	Never			Seldom			Sometimes			Usually			Always		
	7 th	8 th	9 th	7 th	8 th	9 th	7 th	8 th	9 th	7 th	8 th	9 th	7th	8th	9th
(24) I eat lunch at a store or restaurant away from my school.	85	79	76	6	7	7	6	9	11	1	3	5	2	1	1
(25) Students at my school participate in a Youth Advisory Council (YAC) or other student organization that helps plan school lunches.	71	75	79	12	13	5	11	8	6	4	3	5	3	1	5
(26) I help decide what foods will be served for lunch at my school.	83	74	92	5	14	4	7	5	1	4	3	1	1	3	1
(27) I learn at school about foods that are good for me.	23	20	50	17	21	15	30	32	22	17	15	8	14	11	4

RESPONSE	7th Grade		8th Grade		9th Grade	
	Yes	No	Yes	No	Yes	No
(1) Serve more different kinds of foods.	90	10	94	6	96	4
(2) Give students more choices (for example, salad bar, different kinds of drinks, different kinds of desserts).	93	7	94	6	94	6
(3) Serve better tasting food.	86	14	91	9	95	5
(4) Give bigger servings on the plate.	79	21	77	23	81	19
(5) Students should be able to help plan meals and ways of doing things in the cafeteria.	75	25	83	17	80	20
(6) Service should be faster.	71	29	70	30	83	17
(7) Food prices should be lower.	78	22	78	22	83	17

TABLE 10.25 PERCENTAGE RESPONSES TO PERCEPTION ITEMS ON THE NET STATEWIDE ASSESSMENT

FORM 7 - STUDENTS (Grades 4-6)

ITEM		1 ☹			2 🙁			3 🙂			4 😊		
		4 th	5 th	6 th	4 th	5 th	6 th	4 th	5 th	6 th	4 th	5 th	6 th
(1) How do you feel about the food that is fixed for lunch at your school?	Control	15	11	19	10	11	17	48	51	49	27	27	15
	Treatment	6	9	16	14	13	18	47	53	49	33	25	17
(2) How do you feel about learning about foods that are good for you?	Control	2	0	4	8	5	9	29	22	34	61	72	53
	Treatment	2	1	1	5	7	8	30	22	32	62	69	59
(3) How do you feel about helping decide what food you will have for lunch at your school?	Control	7	4	6	10	6	8	25	29	17	58	61	68
	Treatment	3	5	3	8	10	5	30	24	15	59	61	76

ITEM		Never			Sometimes			Always		
		4th	5th	6th	4th	5th	6th	4 th	5th	6th
(14) How often do you eat the lunch fixed at your school?	Control	16	5	4	39	34	26	53	61	70
	Treatment	5	2	4	39	35	34	59	63	62
(15) How often do you help someone at your school decide what will be served for lunch at your school?	Control	69	66	74	18	24	22	12	10	4
	Treatment	57	65	74	32	23	20	10	12	7
(16) How often do your learn from your teacher about foods that are good for you?	Control	18	12	17	43	14	53	39	44	30
	Treatment	10	10	8	48	38	45	42	52	47
(17) How often do you learn from someone at home about foods that are good for you?	Control	14	7	10	38	36	39	48	56	50
	Treatment	9	9	8	40	38	45	51	53	47

ITEM	Fourth Grade				Fifth Grade				Sixth Grade			
	Control		Treatment		Control		Treatment		Control		Treatment	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
(1) Serve more different kinds of foods.	85	15	85	15	77	23	89	11	85	15	90	10
(2) Give students more choices (for example, salad bar, different kinds of drinks, different kinds of desserts).	81	19	81	19	81	19	78	22	89	11	89	11
(3) Serve better tasting food.	83	17	82	18	80	20	78	22	87	13	83	16
(4) Give bigger servings on the plate.	70	30	68	32	65	35	73	27	74	26	71	29
(5) Students should be able to help plan meals and ways of doing things in the cafeteria.	62	38	78	22	75	25	60	40	71	29	79	21
(6) Service should be faster.	66	34	52	48	47	53	53	47	53	47	58	42
(7) Food prices should be lower.	91	9	86	14	79	21	79	21	80	20	76	24

TABLE 10.26 PERCENTAGE RESPONSES TO PERCEPTION ITEMS ON THE NET STATEWIDE ASSESSMENT

FORM 8 - STUDENTS (Grades 2-3)

ITEM		1 ☹		2 😐		3 ☺	
		2nd	3rd	2nd	3rd	2nd	3rd
(1) How do you feel about the food that is fixed for lunch at your school?	Control	6	9	24	36	70	55
	Treatment	6	7	27	28	67	66
(2) How do you feel about learning about foods that are good for you?	Control	2	1	16	11	82	88
	Treatment	2	1	10	7	88	94
(3) How do you feel about helping decide what food you will have for lunch at your school?	Control	8	10	31	23	62	67
	Treatment	5	6	39	37	56	58
	Control						
	Treatment						
	Control						
	Treatment						
	Control						
	Treatment						
	Control						
	Treatment						

ITEM		Never		Always	
		2nd	3rd	2nd	3rd
(14) Do you ask your parents about whether you should eat the foods you hear about on TV?	Control	10	16	90	84
	Treatment	10	9	90	91
(15) Do you eat only the foods that you like most?	Control	75	79	25	21
	Treatment	76	75	24	25
(16) Do you eat some foods now that you did not like when you were younger?	Control	6	11	94	89
	Treatment	7	7	93	93
(17) Do you ever fix a meal for yourself?	Control	24	13	76	87
	Treatment	26	11	74	89
	Control				
	Treatment				
	Control				
	Treatment				
	Control				
	Treatment				

RESPONSE	Second Grade				Third Grade			
	Control		Treatment		Control		Treatment	
	Yes	No	Yes	No	Yes	No	Yes	No
(1) Serve more different kinds of foods.	90	10	89	11	81	19	88	12
(2) Give students more choices (for example, salad bar, different kinds of drinks, different kinds of desserts).	61	39	72	28	80	20	70	30
(3) Serve better tasting food.	72	28	69	31	74	26	71	29
(4) Give bigger servings on the plate.	61	39	63	37	61	39	46	54
(5) Students should be able to help plan meals and ways of doing things in the cafeteria.	61	39	57	43	57	43	65	35
(6) Service should be faster.	47	53	51	49	40	60	51	49
(7) Food prices should be lower.	87	13	82	18	80	20	82	18

TABLE 10.27 PERCENTAGE RESPONSES TO PERCEPTION ITEMS ON THE NET STATEWIDE ASSESSMENT

FORM 9 - STUDENTS (Grades K-1)

ITEM		1 I don't like it. ☹		2 I like it. ☺	
		K	1st	K	1st
(1) How do you feel about the food that is fixed for lunch at your school?	Control	13	7	87	93
	Treatment	20	6	80	94
(2) How do you feel about learning about foods that are good for you?	Control	15	10	85	90
	Treatment	14	5	86	95
(3) How do you feel about helping decide what food you will have for lunch at your school?	Control	16	20	84	80
	Treatment	19	11	81	89

ITEM		Never ☹		Always ☺	
		K	1st	K	1st
(9) Do you eat the lunch fixed at your school?	Control	19	14	81	86
	Treatment	14	8	86	92
(10) Do you help someone at your school decide what will be served for lunch?	Control	50	63	50	37
	Treatment	44	48	56	52
(11) Do you learn from your teacher about foods that are good for you?	Control	20	13	80	87
	Treatment	13	16	87	84
(12) Do you learn from someone at home about foods that are good for you?	Control	21	23	79	77
	Treatment	18	18	82	82

Table 10.28

Distribution of Participants in Plate Waste Study by Grade and Experimental Group in Selected Tennessee School Lunch Programs, 1981

Grade	Number of Participants		
	Comparison	Treatment	Total
K	35	55	90
1	35	50	85
2	35	40	75
3	36	44	80
4	35	40	75
5	37	48	85
6	40	30	70
7			119
8			108
9			84
10			64
11			73
12			54
Total	253	307	862

Table 10.29

Percentage of K-6 Children Reporting Plate Waste of Main Entree.*

Amount of Food Wasted	Experimental Group	
	Comparison	Treatment
None	72%	75%
1/4	8	7
1/2	4	7
3/4	3	3
All	10	7
Not offered, not selected or given away	3	1

*There were no significant differences between comparison and treatment groups.

Table 10.30

Percentage of K-6 Children Reporting Plate Waste of Bread.*

Amount of Food Wasted	Experimental Group	
	Comparison	Treatment
None	56%	45%
1/4	7	4
1/2	5	7
3/4	2	4
All	10	18
Not offered, not selected or given away	20	22

*There were no significant differences between comparison and treatment groups.

Table 10.31

Percentage of K-6 Children Reporting Plate Waste of Cooked Vegetable #1 (Starchy).*

Amount of Food Wasted	Experimental Group	
	Comparison	Treatment
None	63%	45%
1/4	6	7
1/2	1	7
3/4	2	6
All	13	18
Not offered, not selected or given away	15	18

*There were no significant differences between comparison and treatment groups.

Table 10.32

Percentage of K-6 Children Reporting Plate Waste of Cooked Vegetable #2.*

Amount of Food Wasted	Experimental Group	
	Comparison	Treatment
None	38%	24%
1/4	2	8
1/2	5	7
3/4	6	6
All	26	27
Not offered, not selected or given away	23	29

*There were no significant differences between comparison and treatment groups.

Table 10.33

Percentage of K-6 Children Reporting
Plate Waste of Raw Vegetable.*

Amount of Food Wasted	Experimental Group	
	Comparison	Treatment
None	26%	10%
1/4	2	1
1/2	9	3
3/4	7	1
All	24	15
Not offered, not selected or given away	31	70

*There were no significant differences between comparison and treatment groups.

Table 10.34

Percentage of K-6 Children Reporting
Plate Waste of Fruit.*

Amount of Food Wasted	Experimental Group	
	Comparison	Treatment
None	61%	66%
1/4	3	5
1/2	5	4
3/4	6	2
All	12	9
Not offered, not selected or given away	14	14

*There were no significant differences between comparison and treatment groups.

Table 10.35

Percentage of K-6 Children Reporting Plate Waste of Dessert.*

Amount of Food Wasted	Experimental Group	
	Comparison	Treatment
None	58%	53%
1/4	3	4
1/2	3	4
3/4	4	3
All	10	7
Not offered, not selected or given away	22	29

*There were no significant differences between comparison and treatment groups.

Table 10.36

Percentage of K-6 Children Reporting Plate Waste of Milk.*

Amount of Food Wasted	Experimental Group	
	Comparison	Treatment
None	78%	76%
1/4	10	6
1/2	7	7
3/4	3	5
All	3	2
Not offered, not selected or given away	4	4

*There were no significant differences between comparison and treatment groups.

Table 10.37

Percentage of K-6 Children Reporting Plate Waste of Other.*

Amount of Food Wasted	Experimental Group	
	Comparison	Treatment
None	40%	26%
1/4	0	2
1/2	1	2
3/4	3	1
All	18	11
Not offered, not selected or given away	38	57

*There were no significant differences between comparison and treatment groups.

Table 10.38

Mean Percentages of Food Portions Wasted
by Children in Grades K-12
in Selected Tennessee School Lunch Programs, 1981

GRADE	Main Entree	Bread	Starchy Vegetable	Other Cooked Vegetable	Raw Vegetable	Fruit	Dessert	Milk
				PERCENTAGES WASTED				
K	23	33	37	48	75	23	28	17
1	23	38	31	59	44	20	22	13
2	17	34	25	52	46	15	15	13
3	18	24	21	40	48	25	17	11
4	8	21	28	44	45	9	11	10
5	7	19	29	49	55	20	17	4
6	14	19	13	46	47	17	16	14
7	3	2	5	17	20	16	16	5
8	4	3	7	0	22	19	21	6
9	8	6	12	6	21	11	3	9
10	7	8	12	36	48	12	5	9
11	5	6	12	16	44	4	3	4
12	6	4	9	11	49	5	0	5

APPENDIX A

1980 NETSW INFORMATION SHEET AND EVALUATION FORM

(cc1) Wkshp___
(cc2-3) Team___ ___
(cc4) Position___

1980 NETSW
INFORMATION SHEET

I. NAME:______________________________________
(Last) (First) (Middle Initial)

II. POSITION (check one):

A. ___(1) Teacher ___(2) Food Service Manager ___(3) Other (please specify):
____

(cc5-6) B. How many years have you served in this position?__________years

III. SCHOOL:______________________________________
(School Name)

___________________ OR ___________________
(School District) (School System)

___________________ ___________________
(School Street Address) (School Telephone-Area Code and Number)

____
(City) (County) (State) (Zip Code)

IV. HOME:___________________
(Home Telephone-Area Code and Number)

____
(Home Street Address)

____
(City) (County) (State) (Zip Code)

V. EDUCATIONAL BACKGROUND:

(cc7-8) A. Check (✓) the highest level completed:

___(01) Below 8th grade
___(02) 8th grade
___(03) 9th grade
___(04) 10th grade
___(05) 11th grade
___(06) High School Diploma or High School Equivalency Diploma
___(07) One year college
___(08) Two years college
___(09) Three years college
___(10) Four years college
___(11) Bachelors Degree
___(12) Masters Degree
___(13) Doctorate
___(14) Other; please specify:
____

(cc9-11) B. If you have done any graduate work, how many credit hours of graduate work have you completed, including any that were taken while pursuing a Masters Degree or Doctorate?____________________credit hours

C. Special Certification(s) and/or License(s):
(Include level of certification or description of license and the year either was obtained.)

____

____

D. Have you ever taken a formal course in nutrition education?

(cc12) (Check one) ___(1) Yes ___(2) No

(cc13-14) If Yes, what was the most recent year you took such a course? 19___.

E. Have you ever attended a workshop (1-5 days) in nutrition education?

(cc15) (Check one) ___(1) Yes ___(2) No

(cc16-17) If Yes, what was the most recent year you attended such a workshop? 19___

(cc18) F. Have you ever taught or taken part in instruction in nutrition education? ___(1) Yes ___(2) No

If Yes, please describe briefly the nature of the instruction.

____

____

____

VI. TEAM MEMBER:

A. What is the name of your team member?

____
(Last) (First) (Middle Initial)

B. What is his/her position? ______________________________

C. Are they from the same school that you are?

___(1) Yes ___(2) No

(cc1) Wkshp___
(cc2-3) Team ___ ___
(cc4) Position ___

1980 NETSW
EVALUATION FORM

I. Directions: Place a check (✓) in the blank beside those statements that best describe your opinion and write in comments if appropriate.

(cc5) 1. Do you feel that anything of value happened to you during this meeting?

___(1) Yes, quite a lot
___(2) Yes, something
___(3) Not much
___(4) Nothing

(cc6) 2. If you found something of value in this meeting, does any particular happening or idea stand out in your mind?

___(1) Nothing of value happened.
___(2) It was a valuable meeting, but no particular thing stands out.
___(3) Yes, something does stand out for me, namely:

(cc7) 3. If you found something in this meeting to be of no value, was there a particular happening or idea that stands out in your mind as being worthless?

___(1) Most everything was of some value.
___(2) Some parts of the meeting have no value, but no particular thing stands out.
___(3) Yes, something stands out for me as worthless (having no value), namely:

(cc8) 4. Was there any feature about the way this group operated that you thought particularly effective?

___(1) No
___(2) Yes, namely:

(cc9) 5. Was there any feature about the way this group operated that you thought particularly ineffective?

___(1) No
___(2) Yes, namely:

II. Directions: Answer the items in accordance with your own opinions about the five day workshop. There are no right answers. Circle the number on the scale that corresponds to your opinion.

(cc10) 6. Goals of the meeting

Poor: 1 2 3 4	5 Good:
(unclear; diverse; conflicting; unacceptable)	(clear; shared by all; endorsed with enthusiasm)

(cc11) 7. Participation in the meeting

Poor: 1 2 3 4	5 Good:
(few dominate; some passive; some not listened to; several talk at once or interrupt)	(all get in; all are really listened to; open and lively discussion)

(cc12) 8. Decisions made during the meeting

Poor: 1 2 3 4	5 Good:
(no decisions were made; decisions were made to which I feel uncommitted; bad decisions were made)	(good decisions were made; everyone felt a part of the decision-making process; people feel committed to the decision)

(cc13) 9. Your feeling during the meeting

Poor: 1 2 3 4	5 Good:
(I was unable to express my feelings; my feelings were ignored; my feelings were criticized)	(I freely expressed my feelings; I felt understood; I felt support from the participants)

(cc14) 10. Organization of the meeting

Poor: 1 2 3 4	5 Good:
(it was chaotic, it was too tightly controlled; very poorly done; I felt manipulated)	(it was very well organized; it was flexible enough so we were able to influence it; all went smoothly)

(cc15) 11. Relationship among meeting participants

Poor: 1 2 3 4	5 Good:
(my relationship with them is the same as before; I feel antagonistic towards many of them; I don't trust them; there is little potential for a future relationship)	(our relationship is much improved; I trust them more than I did prior to the session; I feel I got to know them better; there is good potential for the future)

(cc16) 12. Attitude about the meeting

Poor: 1 2 3 4 5 Good:
(boring; it was a waste of time; I don't like the way it was presented; disliked it)
(interesting; was helpful; liked it)

(cc17) 13. Presentation of Interpersonal Skills/Communication

Poor: 1 2 3 4 5 Good:
(uninstructional; did not learn much, not informative; too many exercises; too much processing; not enough content)
(learned a lot; was informative; I'll be able to use exercises and materials)

(cc18) 14. Presentation of Interpersonal Skills/Team Building

Poor: 1 2 3 4 5 Good:
(uninstructional; did not learn much, not informative; too many exercises; too much processing; not enough content)
(learned a lot; was informative; I'll be able to use exercises and materials)

(cc19) 15. Presentation of Instructional Skills

Poor: 1 2 3 4 5 Good:
(uninstructional; did not learn much, not informative; too many exercises; too much processing; not enough content)
(learned a lot; was informative; I'll be able to use exerciese and materials)

(cc20) 16. Leaders' respect for peoples feelings

Poor: 1 2 3 4 5 Good:
(not sensitive to feelings of individuals; intolerant of others; critical)
(considerate of others' feelings; non-judgmental; supportive)

(cc21) 17. Leaders' desire to help participants

Poor: 1 2 3 4 5 Good:
(not helpful at all; participants were on their own; not open to questions)
(very helpful; involved in making sure participants were on right track; encouraged questions)

(cc22) 18. Clearness of leaders' instructions

Poor: 1 2 3 4 5 Good:

(spent little time trying to dispel confusion; did not seem to know what should be done, so explanations were vague; unexpected problems seemed to arise frequently; explanations were confusing and meandering)	(explained confusing things completely and thoroughly; knew what was to be done and how to do it; anticipated problems; explanations were clear and concise)

(cc23) 19. Leaders' knowledge of nutrition education

Poor: 1 2 3 4 5 Good:

(not knowledgeable; uncertain; did not respond to questions about nutrition with authority)	(very knowledgeable; competent; addressed questions about nutrition with confidence)

(cc24) 20. Leaders' familiarity with materials presented

Poor: 1 2 3 4 5 Good:

(unfamiliar with materials; suggestions for uses of materials were inadequate)	(knew materials very well; offered good suggestions for using materials)

(cc25) 21. Over-all productivity of the meeting

Poor: 1 2 3 4 5 Good:

(didn't accomplish much; no useful ideas emerged; it got us nowhere)	(got a lot done; very fruitful; something will come of this session)

APPENDIX B

1980 NETSW FOLLOW-UP QUESTIONNAIRE AND DATA

Card Column
(1-3 ID _ _ _)

Nutrition Education Training Program Follow-Up Questionnaire for 1980 NETSW Participants

This questionnaire has been designed by the Nutrition Education and Training (NET) Project evaluation team to evaluate two components of the Tennessee NET program. Specifically, we need your help in reviewing (1) the impact of the 1980 NET Summer Workshops (NETSW) and (2) implementation of your Back Home Action Plan (BHAP). We appreciate the time you spend in completing this questionnaire.

(4) 1. Which workshop did you attend in the summer of 1980? (Please CHECK one.)

_____ Memphis
(1)
_____ Middle Tennessee State University
(2)
_____ University of Tennessee, Knoxville
(3)
_____ East Tennessee State University
(4)

(5) 2. Please check your job classification.

_____ Teacher
(1)
_____ Food Service Manager
(2)
_____ Other (Please specify) ____
(3)

(6) 3. As a result of your 1980 NETSW training how effective do you feel your teacher-food service team has been in making nutrition education a part of your school curriculum?

_____ Very effective
(1)
_____ Effective
(2)
_____ Not sure
(3)
_____ Somewhat effective
(4)
_____ Not effective
(5)

(7) 4. (a) Has your team worked cooperatively with another 1980 NETSW team to implement any NET-related activities?

_____ Yes
(1)
_____ No
(2)

(8) (b) If yes, in your opinion how successful was this joint effort?

_____ Very successful
(1)

_____ Somewhat successful
(2)

_____ Not sure
(3)

_____ Somewhat unsuccessful
(4)

_____ Very unsuccessful
(5)

(9) 5. (a) Have you conducted a "sharing session" to acquaint others with the NET Program?

_____ Yes
(1)

_____ No
(2)

(b) Please estimate the total number of teachers and food service personnel receiving nutrition or food service management training through these sessions:

(10-12) _____ Teachers

3-14) _____ Food Service Personnel

6. Please estimate the total number of persons in each of the following categories that your team has involved in any form of nutrition education since your 1980 NETSW participation:

(15) _____ Superintendents

6-17) _____ Principals

(18-19) _____ System-level supervisors

0-22) _____ Teachers

3-24) _____ Food service managers

5-27) _____ Food service workers

-30) _____ Parents

(31-34) _____ Students

5-37) _____ Other (Please list) ________________________________

(38) 7. How involved in nutrition education do you expect to be next year as a result of your NETSW participation?

_____ Very involved
(1)

_____ Moderately involved
(2)

_____ Not sure
(3)

_____ Moderately uninvolved
(4)

_____ Completely uninvolved
(5)

(39) 8. Looking back at the 1980 NETSW, what activity or content was the most helpful to you in implementing nutrition education in your school? (Check one.)

_____ The process of writing the BHAP
(1)
_____ The opportunity to look at and use nutrition-related materials
(2)
_____ The specific nutrition content of the workshop
(3)
_____ The nutrition activities presented at the workshop
(4)
_____ Sharing ideas and plans with other teams
(5)
_____ Working together as a "team" at the workshop
(6)
_____ Other (Please specify) ____
(7)

(40) 9. Looking back at the 1980 NETSW, what activity or content was the least helpful to you in implementing nutrition education in your school? (Check one.)

_____ The interpersonal skills portion of the workshop
(1)
_____ Not enough time was devoted to nutrition content
(2)
_____ Not enough time was devoted to writing our BHAP
(3)
_____ Testing, daily evaluations, and reviews
(4)
_____ Having to work as a team
(5)
_____ Other (Please specify) ____
(6)

(41) 10. We are interested in learning your opinions about the effectiveness of the materials you received in the summer workshop. Please rate the materials listed below.

(a) USDA - "FOOD"

_____ Very effective
(1)
_____ Somewhat effective
(2)
_____ Did not use
(3)
_____ Somewhat ineffective
(4)
_____ Very ineffective
(5)

(42) (b) Resource list with notations about availability (i.e., no cost or inexpensive)

_____ Very effective
(1)
_____ Somewhat effective
(2)
_____ Did not use
(3)
_____ Somewhat ineffective
(4)
_____ Very ineffective
(5)

(43) (c) Brochures/catalogues - identifying materials available for purchase

_____ Very effective
(1)
_____ Somewhat effective
(2)
_____ Did not use
(3)
_____ Somewhat ineffective
(4)
_____ Very ineffective
(5)

(44) (d) "Good Foods Coloring Book"

_____ Very effective
(1)
_____ Somewhat effective
(2)
_____ Did not use
(3)
_____ Somewhat ineffective
(4)
_____ Very ineffective
(5)

(45) (e) Activity Booklet/Bulletin Board Ideas Booklet

_____ Very effective
(1)
_____ Somewhat effective
(2)
_____ Did not use
(3)
_____ Somewhat ineffective
(4)
_____ Very ineffective
(5)

(46) (f) Activity packets (no cost: included puppet show, play, spirit masters, lesson plans, etc.)

_____ Very effective
(1)
_____ Somewhat effective
(2)
_____ Did not use
(3)
_____ Somewhat ineffective
(4)
_____ Very ineffective
(5)

(47) (g) Brochures, pamphlets, leaflets and xeroxed handouts pertaining to nutrition information

_____ Very effective
(1)
_____ Somewhat effective
(2)
_____ Did not use
(3)
_____ Somewhat ineffective
(4)
_____ Very ineffective
(5)

(48) (h) Recipe Ideas

_____ Very effective
(1)
_____ Somewhat effective
(2)
_____ Did not use
(3)
_____ Somewhat ineffective
(4)
_____ Very ineffective
(5)

Next we would like to ask you some questions related specifically to your Back Home Action Plan (BHAP).

(49) II. (a) How many changes have you made in the BHAP you developed during the 1980 summer workshop?

_____ No changes have been made
(1)
_____ Only slight changes have been made (less than 1/4 has been changed)
(2)
_____ Moderate changes have been made (changed 1/4 to 1/2 of it)
(3)
_____ Extensive changes have been made (changed more than 1/2 of it)
(4)
_____ We have not used our BHAP at all
(5)

(50) (b) Specifically what kinds of major changes have you made in your BHAP?

_____ We have had to change the time line for our BHAP
(1)
_____ We have reduced the content of our BHAP
(2)
_____ We have added to the content of our BHAP
(3)
_____ Other (Please specify) ____
(4)

(51) 12. How would you describe your progress in implementing your BHAP?

_____ Very successful . . . we're right on target
(1)
_____ Moderately successful . . . only experienced slight delay
(2)
_____ Not sure
(3)
_____ Somewhat behind schedule, but we're trying to catch up
(4)
_____ Our progress is not satisfactory
(5)

(52) 13. What component of your BHAP has been the most successful?

_____ Student involvement with nutrition education
(1)
_____ Parent involvement
(2)
_____ Sharing sessions
(3)
_____ Team work involved
(4)
_____ Other (Please specify) ________________________________
(5)

(53) 14. What component of your BHAP has been the least successful?

_____ Student involvement with nutrition education
(1)
_____ Parent involvement
(2)
_____ Sharing sessions
(3)
_____ Team work involved
(4)
_____ Other (Please specify) ________________________________
(5)

(54) 15. How have you involved parents in nutrition education as a part of your 1980 BHAP?

_____ PTA meetings
(1)
_____ Parents have provided "nutritional snacks" for children in the classroom
(2)
_____ Parents eat in the lunchroom with children
(3)
_____ Parents have taken part in special nutrition programs in the classroom
(4)
_____ Other (Please specify) ________________________________
(5)

(55) 16. (a) How do you plan to measure increases in student consumption of nutritious food as a result of your 1980 BHAP?

_____ Plate waste survey
(1)
_____ "One bite" clubs
(2)
_____ Measure increased consumption of special food group (e.g., vegetables)
(3)
_____ Other (Please specify) _______________
(4)
_____ I will not be measuring this
(5)

(56) (b) If we contacted you in the next month could you provide us with a written summary of the information referred to in (a) above?

_____ Yes
(1)
_____ No
(2)

(57) 17. (a) Have you measured increases in student knowledge as a result of their participation in this program?

_____ Yes
(1)
_____ No
(2)

(58) (b) If we contacted you in the next month could you provide us with a written summary of this information?

_____ Yes
(1)
_____ No
(2)

(59) 18. Do you feel that implementation of your 1980 BHAP increased student involvement in decision-making about school feeding programs in your school?

_____ Yes
(1)
_____ No
(2)

(60) 19. Have you used your school breakfast program for teaching children about nutrition?

_____ Yes
(1)
_____ No
(2)

(61) 20. Have you used your school lunch program for teaching children about nutrition?

_____ Yes
(1)
_____ No
(2)

Question 3 As a result of your 1980 NETSW training how effective do you feel your teacher-food service team has been in making nutrition education a part of your school curriculum?

Response Alternative	Workshop 1	Workshop 2	Workshop 3	Workshop 4	Career Teacher	Mangers	Total
Very effective	53%	15%	36%	62%	44%	48%	43%
Effective	32%	85%	52%	33%	49%	42%	49%
Not Sure	5%	-0-	-0-	-0-	-0-	3%	1%
Somewhat effective	10%	-0-	12%	5%	7%	7%	7%
Not effective	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Number of Respondents	19	13	25	21	41	33	100%

Question 4 Has your team worked cooperatively with another 1980 NETSW team to implement any NET-related activities?

Response Alternative	Workshop 1	Workshop 2	Workshop 3	Workshop 4	Career Teacher	Managers	Total
Yes	47%	8%	33%	15%	23%	38%	27%
No	53%	92%	67%	85%	77%	62%	73%
Number of Responses	19	13	24	20	40	32	100%

Question 5(a) Have you conducted a "sharing session" to acquaint others with the NET Program?

Response Alternative	Workshop 1	Workshop 2	Workshop 3	Workshop 4	Career Teacher	Career Managers	Total
Yes	94%	100%	100%	100%	100%	97%	99%
No	6%	-0-	-0-	-0-	-0-	3%	1%
Number of Responses	18	13	24	20	41	30	100%

Question 5(b) Please estimate the total number of teachers and food service personnel receiving nutrition or food service management training through these sharing sessions:

Response Alternative	Workshop 1 Teachers	Workshop 1 Food Service Managers	Workshop 2 Teachers	Workshop 2 Food Service Managers	Workshop 3 Teachers	Workshop 3 Food Service Managers	Workshop 4 Teachers	Workshop 4 Food Service Managers	Totals
Teachers	373	159	151	105	143	85	152	132	1300
Food Service Personnel	34	28	62	28	81	74	37	44	388
Total	407	187	213	133	224	159	189	176	1688*
Number of Respondents	11	8	8	5	12	10	11	8	

*The totals reported here represent a summation of the figures given by teachers and food service managers on the questionnaire. As questionnaires were not matched by teams, some overlap or overstatement may be evident in total scores.

Question 6 Please estimate the total number of persons in each of the following categories that your team has involved in any form of nutrition education since your 1980 NETSW participation:

Response Alternative	Workshop 1		Workshop 2		Workshop 3		Workshop 4		
	Teachers	Food Service Managers	Teachers	Food Service Managers	Teachers	Food Service Managers	Teachers	Food Service Managers	Totals
Superintendents	4	2	1	1	2	3	5	3	21
Principals	18	9	7	2	10	8	13	11	78
System-level Supervisors	21	9	7	4	16	12	11	8	88
Teachers	389	204	243	84	168	104	157	138	1487
Food service managers	25	7	20	5	48	56	11	10	182
Food service workers	127	22	194	37	31	26	35	26	498
Parents	1141	622	349	67	201	78	489	275	3222
Students	4317	2080	1873	1182	723	575	1140	1792	13682
Other (please list)*	4	-0-	625	-0-	-0-	-0-	1	1	631
Total	6044	2955	3319	1382	1199	862	1862	2264	19889**

*Other responses included: student teachers, Teachers' Corporation, other students outside of the program and nutrition specialists.

**The totals reported here represent a summation of the figures given by teachers and food service managers on the questionnaire. As questionnaires were not matched by teams, some overlap or overstatement may be evident in total scores.

Number of Respondents	10	7	8	4	12	9	11	8	

Question 7 How involved in nutrition education do you expect to be next year as a result of your NETSW participation?

Response Alternative	Workshop 1	Workshop 2	Workshop 3	Workshop 4	Career		Total
					Teacher	Managers	
Very involved	63%	46%	12%	45%	41%	38%	41%
Moderately involved	21%	16%	64%	40%	39%	37%	37%
Not sure	16%	23%	20%	15%	15%	22%	18%
Moderately uninvolved	-0-	15%	-0-	-0-	5%	-0-	3%
Completely uninvolved	-0-	-0-	4%	-0-	-0-	3%	1%
Number of Responses	19	13	25	20	41	32	100%

Question 8 Looking back at the 1980 NETSW, what activity or content was the most helpful to you in implementing nutrition education in your school? (Check one.)

Response Alternatives	Workshop 1	Workshop 2	Workshop 3	Workshop 4	Career Teacher	Career Managers	Total
The process of writing the BHAP	16%	17%	10%	11%	16%	11%	14%
The opportunity to look at and use nutrition-related materials	11%	50%	37%	34%	37%	18%	31%
The specific nutrition content of the workshop	5%	-0-	19%	-0-	5%	7%	6%
The nutrition activities presented at the workshop	5%	-0-	5%	11%	5%	7%	5%
Sharing ideas and plans with other teams	21%	17%	19%	-0-	10%	21%	15%
Working together as a "team" at the workshop	42%	16%	10%	33%	24%	32%	26%
Other (Please specify)*	-0-	-0-	-0-	11%	3%	4%	3%
Number of Respondents	19	12	24	20	39	32	100%

* Other responses included: money, funding availability

Question 9 Looking back at the 1980 NETSW, what activity or content was the least helpful to you in implementing nutrition education in your school? (Check one.)

Response Alternative	Workshop 1	Workshop 2	Workshop 3	Workshop 4	Career Teacher	Career Managers	Total
The interpersonal skills portion of the workshop	12%	30%	45%	71%	50%	39%	42%
Not enough time was devoted to nutrition content	-0-	20%	35%	5%	12%	17%	15%
Not enough time was devoted to writing our BHAP	19%	20%	5%	5%	9%	10%	11%
Testing, daily evaluations, and reviews	12%	30%	5%	10%	6%	17%	13%
Having to work as a team	25%	-0-	5%	5%	9%	10%	9%
Other (please specify)*	32%	-0-	5%	4%	14%	7%	10%
Number of Respondents	19	12	23	21	39	32	100%

*Other responses included: nutrition examination, activities for students, and not having funds to buy materials

Question 10a We are interested in learning your opinions about the effectiveness of the materials you received in the summer workshop. Please rate the materials listed below.

USDA - "FOOD"

Response Alternative	Workshop 1	Workshop 2	Workshop 3	Workshop 4	Career Teacher	Career Managers	Total
Very effective	47%	23%	48%	57%	44%	55%	46%
Somewhat effective	42%	62%	48%	33%	46%	36%	45%
Did not use	5%	15%	4%	5%	8%	6%	6%
Somewhat ineffective	6%	-0-	-0-	5%	2%	3%	3%
Very ineffective	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Number of Respondents	19	13	23	21	39	33	100%

Question 10b Please rate:

Resource list with notations about availability (i.e., no cost or inexpensive)

Response Alternative	Workshop 1	Workshop 2	Workshop 3	Workshop 4	Career Teacher	Career Managers	Total
Very effective	65%	62%	38%	65%	56%	48%	55%
Somewhat effective	18%	28%	58%	30%	37%	45%	38%
Did not use	6%	-0-	4%	5%	5%	4%	4%
Somewhat ineffective	11%	-0-	-0-	-0-	2%	3%	3%
Very ineffective	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Number of Respondents	17	13	24	20	41	29	100%

Question 10c Please rate:

Brochures/catalogs - identifying materials available for purchase

Response Alternative	Workshop 1	Workshop 2	Workshop 3	Workshop 4	Career Teacher	Career Managers	Total
Very effective	50%	46%	46%	67%	54%	55%	53%
Somewhat effective	50%	54%	42%	24%	41%	35%	41%
Did not use	-0-	-0-	12%	9%	5%	10%	6%
Somewhat ineffective	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Very ineffective	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Number of Respondents	18	13	24	21	41	31	100%

Question 10d Please rate:

"Good Foods Coloring Book"

Response Alternative	Workshop 1	Workshop 2	Workshop 3	Workshop 4	Career Teacher	Career Manager	Total
Very effective	100%	77%	62%	65%	78%	69%	75%
Somewhat effective	-0-	23%	17%	20%	17%	10%	15%
Did not use	-0-	-0-	21%	10%	5%	17%	9%
Somewhat ineffective	-0-	-0-	-0-	5%	-0-	4%	1%
Very ineffective	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Number of Respondents	17	13	24	20	41	29	100%

Question 10e Please rate:

Activity Booklet/Bulletin Board Ideas Booklet

Response Alternative	Workshop 1	Workshop 2	Workshop 3	Workshop 4	Career Teacher	Career Manager	Total
Very effective	74%	85%	60%	80%	75%	69%	74%
Somewhat effective	21%	8%	32%	20%	20%	25%	21%
Did not use	5%	7%	8%	-0-	5%	6%	5%
Somewhat ineffective	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Very ineffective	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Number of Respondents	19	13	25	20	41	32	100%

Question 10f Please rate:

Activity packets (no cost: included puppet show, play, spirit masters, lesson plans, etc.)

214

Response alternative	Workshop 1	Workshop 2	Workshop 3	Workshop 4	Career Teacher	Career Manager	Total
Very effective	79%	77%	50%	75%	73%	65%	70%
Somewhat effective	16%	15%	29%	15%	20%	16%	18%
Did not use	5%	8%	21%	10%	7%	19%	12%
Somewhat ineffective	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Very ineffective	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Number of Respondents	19	13	24	20	41	32	100%

213

Question 10g Please rate:

Brochures, pamphlets, leaflets, and xeroxed handouts pertaining to nutrition information

Response Alternative	Workshop 1	Workshop 2	Workshop 3	Workshop 4	Career Teacher	Career Manager	Total
Very effective	59%	67%	50%	65%	56%	63%	60%
Somewhat effective	41%	33%	42%	29%	39%	33%	36%
Did not use	-0-	-0-	8%	6%	5%	4%	4%
Somewhat ineffective	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Very ineffective	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Number of Respondents	17	12	24	17	39	27	100%

Question 10h Please rate:

Recipe ideas

Response Alternative	Workshop 1	Workshop 2	Workshop 3	Workshop 4	Career Teacher	Career Manager	Total
Very effective	60%	46%	26%	37%	42%	40%	42%
Somewhat effective	33%	27%	42%	53%	44%	36%	39%
Did not use	7%	18%	32%	10%	11%	24%	17%
Somewhat ineffective	-0-	9%	-0-	-0-	3%	-0-	2%
Very ineffective	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Number of Respondents	16	11	19	19	37	52	100%

Question 11a — Next we would like to ask you some questions related specifically to your Back Home Action Plan (BHAP).

How many changes have you made in the BHAP you developed during the 1980 summer workshop?

Response Alternative	Workshop 1	Workshop 2	Workshop 3	Workshop 4	Career Teacher	Career Manager	Total
No changes have been made	11%	-0-	4%	10%	8%	6%	7%
Only slight changes have been made (less than 1/4 has been changed)	33%	77%	67%	60%	60%	55%	59%
Moderate changes have been made (changed 1/4 to 1/2 of it)	45%	23%	21%	15%	22%	32%	25%
Extensive changes have been made (changed more than 1/2 of it)	11%	-0-	8%	15%	10%	7%	9%
We have not used our BHAP at all	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Number of Respondents	18	13	24	20	40	31	100%

Question 11b Specifically what kinds of major changes have you made in your BHAP?

Response Alternative	Workshop 1	Workshop 2	Workshop 3	Workshop 4	Career Teacher	Career Manager	Total
We have had to change the time line for our BHAP	13%	18%	24%	40%	20%	36%	25%
We have reduced the content of our BHAP	29%	27%	4%	5%	12%	16%	16%
We have added to the content of our BHAP	29%	18%	48%	40%	41%	28%	34%
Other (please specify)	-0-	10%	4%	-0-	2%	4%	3%
More than 1 response	29%	27%	20%	15%	25%	16%	22%
Number of Respondents	14	11	21	20	41	25	100%

Other responses included: changes made in some of the resources as a result of price changes, changes in grade level, and added community involvement to the plan

Question 12 How would you describe your progress in implementing your BHAP?

Response Alternative	Workshop 1	Workshop 2	Workshop 3	Workshop 4	Career		Total
					Teacher	Manager	
Very successful.... we're right on target	56%	27%	20%	65%	46%	41%	43%
Moderately successful ... only experienced slight delay	28%	64%	64%	20%	39%	44%	43%
Not sure	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Somewhat behind schedule, but we're trying to catch up	11%	9%	12%	15%	10%	15%	12%
Our progress is not satisfactory	5%	-0-	4%	-0-	5%	-0-	2%
Number of Respondents	18	13	25	20	41	32	100%

Question 13 What component of your BHAP has been the most successful?

Response Alternative	Workshop 1	Workshop 2	Workshop 3	Workshop 4	Career Teacher	Career Manager	Total
Student involvement with nutrition education	85%	77%	61%	100%	84%	74%	80%
Parent involvement	-0-	-0-	13%	-0-	5%	4%	4%
Sharing sessions	-0-	-0-	4%	-0-	-0-	4%	1%
Team work involved	15%	23%	22%	-0-	11%	18%	15%
Other (Please specify)	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Number of Respondents	19	13	24	20	41	31	100%

Question 14 What component of your BHAP has been the least successful?

Response Alternative	Workshop 1	Workshop 2	Workshop 3	Workshop 4	Career		Total
					Teacher	Manager	
Student involvement with nutrition education	-0-	-0-	4%	-0-	-0-	4%	1%
Parent involvement	31%	75%	54%	21%	46%	43%	45%
Sharing sessions	38%	25%	42%	42%	38%	36%	37%
Team work involved	-0-	-0-	-0-	5%	-0-	4%	2%
Other (please specify)	31%	-0-	-0-	32%	16%	13%	15%
Number of Respondents	16	12	24	19	38	30	100%

Other responses included: getting teachers to participate, not enough time to do all we wanted

Question 15 How have you involved parents in nutrition education as a part of your 1980 BHAP?

Response Alternative	Workshop 1	Workshop 2	Workshop 3	Workshop 4	Career		Total
					Teacher	Manager	
PTA meetings	-0-	9%	9%	9%	5%	9%	7%
Parents have provided "nutritional snacks" for children in the classroom	5%	-0-	-0-	24%	10%	6%	7%
Parents eat in the lunchroom with children	26%	36%	23%	19%	17%	34%	26%
Parents have taken part in special nutrition programs in the classroom	11%	-0-	14%	-0-	7%	6%	6%
Other (please specify)	11%	-0-	-0-	-0-	5%	-0-	3%
More than 1 response	47%	55%	54%	48%	56%	45%	51%
*Other responses included: Parents spoke to class, parents prepared foreign foods, started parents' advisory council, parents sent fruit and vegetable recipes, and developed "at-home progress charts."							
Number of Respondents	19	11	22	21	71	32	100%

Question 16 How do you plan to measure increases in student consumption of nutritious food as a result of your 1980 BHAP?

Response Alternative	Workshop 1	Workshop 2	Workshop 3	Workshop 4	Career Teacher	Career Manager	Total
Plate waste survey	42%	37%	53%	45%	34%	63%	46%
"One bite" clubs	26%	-0-	-0-	5%	10%	7%	8%
Measure increased consumption of special food group(i.e., vegetables)	5%	27%	18%	10%	16%	10%	14%
Other (please specify)*	5%	9%	-0-	5%	5%	3%	4%
More than 1 response	17%	9%	24%	10%	19%	10%	15%
Number of Respondents	19	11	23	20	42	30	100%

*Other responses included: Parent observations, student surveys and snack surveys.

Question 17 Have you measured increases in student knowledge as a result of their participation in this program?

Response Alternative	Workshop 1	Workshop 2	Workshop 3	Workshop 4	Career Teacher	Career Manager	Total
Yes	83%	83%	83%	90%	85%	86%	85%
No	17%	17%	17%	10%	15%	14%	15%
Number of Respondents	18	12	23	20	41	29	100%

Question 18 Do you feel that implementation of your 1980 BHAP increased student involvement in decision-making about school feeding programs in your school?

Response Alternative	Workshop 1	Workshop 2	Workshop 3	Workshop 4	Career Teacher	Career Manager	Total
Yes	78%	69%	83%	75%	76%	81%	77%
No	22%	31%	17%	25%	24%	19%	23%
Number of Respondents	18	13	24	20	41	31	100%

Question 19 Have you used your school breakfast program for teaching children about nutrition?

Response Alternative	Workshop 1	Workshop 2	Workshop 3	Workshop 4	Career Teacher	Career Manager	Total
Yes	76%	36%	76%	56%	62%	71%	63%
No	24%	64%	24%	44%	38%	29%	37%
Number of Respondents	17	11	21	18	37	28	100%

Question 20 Have you used your school lunch program for teaching children about nutrition?

Response Alternative	Workshop 1	Workshop 2	Workshop 3	Workshop 4	Career Teacher	Career Manager	Total
Yes	100%	100%	100%	100%	100%	100%	100%
No	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Number of Respondents	18	13	24	20	41	31	100%

APPENDIX C

EXPANSION GRANT QUESTIONNAIRE FOR NONPARTICIPANTS

THE UNIVERSITY OF TENNESSEE
COLLEGE OF EDUCATION
KNOXVILLE, TENNESSEE 37916

BUREAU OF EDUCATIONAL RESEARCH AND SERVICE

M E M O R A N D U M

TO: Nutrition Education and Training Program 1979 Summer Workshop Participan

FROM: Trudy W. Banta, NET Evaluation Project Director

SUBJECT: Expansion Grants

DATE: December 1, 1980

As a participant in the Nutrition Education and Training Program 1979 Summer Workshop, you were eligible to apply for an NET $200 Expansion Grant. The NET Evaluation team is looking at the expansion grant program as a part of the total program evaluation and requests your assistance. Specifically, we are interested in why representatives of certain schools chose to apply for the expansion grant program. Would you be willing to help us determine the answer to this question? If so, please complete the brief questionnaire which is enclosed and return it in the stamped self-addressed envelope.

Your response will assist project staff in future planning. Ideas and/or questions are welcome.

TWB/ecb

Enclosure

Nutrition Education and Training Program Expansion Grants

Questionnaire for Non-Participants

Your Name ____________________ Your Position ____________________

School Name ____________________ School System ____________________

A. Please check (✓) as many reasons as apply for your decision not to apply for an NET expansion grant.

1. _____ Application procedure too complicated or time-consuming
2. _____ Did not realize my school was eligible
3. _____ Could not meet application deadline
4. _____ Believed competition would be too rigorous for my school to be selected
5. _____ Lack of support/authorization from administrators in my school or school system
6. _____ $200 insufficient to carry out described plan
7. __✓__ Too many progress reports required during year
8. _____ "Share Sessions" not possible to implement in my school
9. _____ Scrapbook requirement too time-consuming
10. _____ Too many requirements for "Back Home Action Plan"
11. _____ Other: Please explain in space below

B. If you checked item 10 in section A, check (✓) those of the following requirements which you considered to be excessive.

1. _____ To incorporate a new teacher(s) into the "Team," and together all actively take part in planning, submitting and implementing the "Expansion" Grant Plan.
2. _____ To develop a Problem Statement (as stated in the Request for Proposal): "May use same Problem Statement developed in the NETSW, 1979 Summer Workshop; may update and/or revise Problem Statement developed in the NETSW, 1979 Summer Workshop; or may define a new problem with a newly developed Problem Statement."
3. _____ To include student nutrition related activities in the classroom
4. _____ To include student nutrition related activities in the lunchroom
5. _____ To include student nutrition related activities in the home
6. _____ To include parental nutrition related activities involving classroom or lunchroom (or both) and at home
7. _____ To design Pre and Post Nutrition assessments for students based on "Expansion" Grant Plan.
8. _____ To account for methods of spending funds for BHAP activities.
9. _____ To include objectives with "action steps"/activities, resources/materials, evaluation, responsibility for "action steps"/activity and time frame (approximate) for each objective listed. (form included in "BHAP" which is supplied by NET)

Please return in enclosed enveloped by December 19, 1980 to:

Dr. Trudy W. Banta
NET Project Director
College of Education
212 Claxton Education Bldg.
The University of Tennessee
Knoxville, TN 37916
615//974-3288

Thank you for your assistance!

"Other" Reasons for Not Applying

The following comments are listed as they were written by respondents, except lengthy comments (*) which have been paraphrased.

- System was delayed starting and mail, including application, was received 10 days after deadline.
- Superintendent would not consider breakfast program at the time. Now he will, but teachers will not help and co-workers in kitchen became ill.

* Cafeteria manager and teachers have less time this year than last to plan together. I am teaching nutrition again this year, but without expansion grant. I enjoyed the course and want to be kept informed about the program.

- The P.T.A. and school provide extra money for programs such as this. I continue the nutrition unit without the added responsibility of meetings, etc.
- I could not use the money in the way I felt most beneficial. I paid for those things and it was a substantial amount.
- Changed teaching assignment in the school.
- Many of staff transferred to other schools and others were not interested in the "team."
- School closed and team members are in new positions at two different schools.
- School was under transition of being closed.
- There was far too much work involved with little or no teacher stipend to partially compensate for required time to carry out expansion grant.
- A new person was to work on the project and did not understand what to do.
- Team partner was not authorized to plan cafeteria activities, only carried out those plans made by teacher, and only after teacher had plans approved.

- We were working on Southern Association last spring which was time consuming. Also, the working relationship was not one of cooperation between teacher and manager. It was difficult to find time together to work on plans.
- Just not enough time to carry it out. I'm too busy.
- No free time at school for planning activities, etc. I think more time should have been spent during the workshop planning difinite activities, finding or making the materials to carry out the activities, etc.
- Because of health problems, I was unable to add anything extra. It has taken all of my current strength to maintain my work at a satisfactory level.
- Cafeteria manager was very ill and retired at end of first year that we participated.
- I could find no other teacher willing to spend the time needed for scrapbook reports.
- My partners moved to another school in one system and we would not have a chance to meet and work together as before. Paperwork is time consuming.
- I changed positions from 4th grade teacher to reading. Too much work would be necessary for me to work with others on the program. (I do not have a regular classroom.)
- Days are so filled with required activities, it is hard to carry out. . .I chose to teach "nutrition" in class without the extras that make it enjoyable simply because I haven't the time.
- Purchasing, placing and accounting for materials required too much time and effort for $200.
- Food service manager at our school transferred out of system.
- Our school system became very involved in the original training program and it became so time consuming that it interfered with out regular classroom activities. When I found out how much work was involved in the Expansion Grant, I decided it wasn't worth the instruction time that was taken away from other subjects.

APPENDIX D

MATERIALS FOR FOLLOW-UP OF EXPANSION GRANT PARTICIPANTS

Attachment A

THE UNIVERSITY OF TENNESSEE
COLLEGE OF EDUCATION
KNOXVILLE, TENNESSEE 37916

BUREAU OF EDUCATIONAL RESEARCH AND SERVICE

March 18, 1981

Dear Ms.

Enclosed is a draft of a questionnaire to be used to evaluate the Nutrition Education and Training (NET) Expansion Grant Program. As discussed in our telephone conversation, I would like you to review the questionnaire in terms of appropriateness and ease in responding. To be useful, the questionnaire must include all aspects of the expansion grant program, and instructions for completion of the questionnaire must be clear. Please write your comments, corrections, and suggestions on the questionnaire and return it in the enclosed envelope by April 1, 1981.

As a former teacher, I realize that there are countless demands on your time. Your willingness to assist with this review is very much appreciated.

Sincerely,

Pamela Freeman

Pamela Freeman
NIE Associate and NET Evaluator

/pk

Enclosures

cc: Dr. Trudy Banta, NET Project Director

(Include space for team members' names, school name, and school system on cover sheet.)

NET SCRAPBOOK SUMMARY FORM

PART A. As a team, (1) list the activities which were conducted using "Expansion" Grant funds to accomplish each objective; (2) list the outcomes of the activities; and (3) rate the success of the activities in accomplishment of the objectives by circling one number on each 7-point scale.

Example:

Objective: Include student nutrition related activities in the lunchroom.

Activities	Outcomes
Held tasting party in lunchroom, conducted by teacher	All children tasted at least one food that was unfamiliar to them. Two children were observed bringing in their lunches a food that had been unfamiliar to them prior to the tasting party.

	NOT SUCCESSFUL			MODERATELY SUCCESSFUL			VERY SUCCESSFUL
Success Rating:	1	2	3	4	5	6	7

* *

1. Objective: Include a new teacher(s) into the "Team" and active participation of all team members in planning, submitting and implementing the "Expansion" Grant Plan.

Activities	Outcomes

	NOT SUCCESSFUL			MODERATELY SUCCESSFUL			VERY SUCCESSFUL
Success Rating:	1	2	3	4	5	6	7

NET SCRAPBOOK SUMMARY FORM, p. 2

2. Objective: Develop a Problem Statement or use Problem Statement developed in the NET Summer Workshop, 1979.

Activities | Outcomes

	NOT SUCCESSFUL			MODERATELY SUCCESSFUL			VERY SUCCESSFUL
Success Rating:	1	2	3	4	5	6	7

3. Objective: Include student nutrition related activities in the classroom.

Activities | Outcomes

	NOT SUCCESSFUL			MODERATELY SUCCESSFUL			VERY SUCCESSFUL
Success Rating:	1	2	3	4	5	6	7

4. Objective: Include student nutrition related activities in the lunchroom.

Activities

Outcomes

	NOT SUCCESSFUL			MODERATELY SUCCESSFUL			VERY SUCCESSFUL
Success Rating:	1________	2________	3________	4________	5________	6________	7

5. Objective: Include student nutrition related activities in the home.

Activities

Outcomes

	NOT SUCCESSFUL			MODERATELY SUCCESSFUL			VERY SUCCESSFUL
Success Rating:	1________	2________	3________	4________	5________	6________	7

6. Objective: Include parental nutrition related activities involving classroom or lunchroom (or both) and at home.

Activities	Outcomes

	NOT SUCCESSFUL			MODERATELY SUCCESSFUL			VERY SUCCESSFUL
Success Rating:	1	2	3	4	5	6	7

7. Objective: Design of Pre and Post Nutrition Assessments for students based on "Expansion" Grant Plan.

Activities	Outcomes

	NOT SUCCESSFUL			MODERATELY SUCCESSFUL			VERY SUCCESSFUL
Success Rating:	1	2	3	4	5	6	7

8. Objective: Account for methods of spending funds for "Expansion" Grant activities.

Activities

Outcomes

	NOT SUCCESSFUL			MODERATELY SUCCESSFUL			VERY SUCCESSFUL
Success Rating:	1	2	3	4	5	6	7

9. Objective: Hold two 60-minute "Share Sessions."

Activities

Outcomes

	NOT SUCCESSFUL			MODERATELY SUCCESSFUL			VERY SUCCESSFUL
Success Rating:	1	2	3	4	5	6	7

NET SCRAPBOOK SUMMARY FORM, p. 6

PART B. As a team, rate the overall success of the "Expansion" Grant program as a way to augment NET funds and increase NET activities in your school.

	NOT SUCCESSFUL			MODERATELY SUCCESSFUL			VERY SUCCESSFUL
Success Rating:	1_______	2_______	3_______	4_______	5_______	6_______	7

PART C. If your team has comments about any aspect of the "Expansion" Grant program, please write these comments in the space below.

THANK YOU FOR PARTICIPATING IN THIS EVALUATION ACTIVITY. RETURN THIS FORM BY TO:

Dr. Trudy Banta
NET Project Director
College of Education
212 Claxton Education Bldg.
The University of Tennessee
Knoxville, TN 37916
615/974-3328

Attachment B

NET SCRAPBOOK SUMMARY FORM

Names and Positions of Team Members:

Name: ____________________ Position: ____________________

Name: ____________________ Position: ____________________

Name: ____________________ Position: ____________________

Name: ____________________ Position: ____________________

Name of School:

____

Name of School System:

____

****

PART A.

Instructions: As a team, refer to the "Back Home Action Plan" that you developed when you applied for the expansion grant. Consider each objective, the activities that you proposed for accomplishment of the objective, and the outcome of the objective; then rate the success of the activities in accomplishing the objectives by circling one number on the 7-point scale. If the activities were not successful or were not conducted, circle the 1; if the activities were as successful as you believe they could have been, circle the 7; etc.

Objective: Include a new teacher(s) into the "team" and active participation of all team members in planning, submitting and implementing the "Expansion Grant" Plan.

	Not Successful			Moderately Successful			Very Successful
Success Rating:	1	2	3	4	5	6	7

Objective: Include student nutrition related activities in the classroom.

	Not Successful			Moderately Successful			Very Successful
Success Rating:	1	2	3	4	5	6	7

Objective: Include student nutrition related activities in the lunchroom.

	Not Successful			Moderately Successful			Very Successful
Success Rating:	1	2	3	4	5	6	7

Objective: Include student nutrition related activities in the home.

	Not Successful			Moderately Successful			Very Successful
Success Rating:	1	2	3	4	5	6	7

Objective: Include parental nutrition related activities involving classroom or lunchroom (or both) and at home.

	Not Successful			Moderately Successful			Very Successful
Success Rating:	1	2	3	4	5	6	7

Objective: Design of Pre- and Post-Nutrition Assessments for students based on "Expansion Grant" Plan.

	Not Successful			Moderately Successful			Very Successful
Success Rating:	1	2	3	4	5	6	7

Objective: Hold two 60-minute "Share Sessions."

	Not Successful			Moderately Successful			Very Successful
Success Rating:	1	2	3	4	5	6	7

PART B.

Instructions: As a team, rate the overall success of the "Expansion Grant" program as a way to augment NET funds and increase NET activities in your school.

	Not Successful			Moderately Successful			Very Successful
Overall Success Rating:	1	2	3	4	5	6	7

PART C.

Instructions: If your team has comments about any aspect of the "Expansion Grant" program, please write these comments in the space below.

THANK YOU FOR PARTICIPATING IN THIS EVALUATION ACTIVITY.

RETURN THIS FORM BY MAY 13, 1981 TO:

Dr. Trudy Banta
NET Project Director
College of Education
212 Claxton Education Building
The University of Tennessee
Knoxville, TN 37916
615/974-4165

Attachment C

THE UNIVERSITY OF TENNESSEE
COLLEGE OF EDUCATION
KNOXVILLE, TENNESSEE 37916

BUREAU OF EDUCATIONAL RESEARCH AND SERVICE

May 1, 1981

Dear Colleagues:

Enclosed is a brief questionnaire to be used in evaluating the "Expansion Grant" portion of the Nutrition Education and Training program (NET). As recipients of expansion grant funds, only you can provide the necessary information for this evaluation. Therefore, I am requesting that you complete the questionnaire as a team and return it to me by May 13, 1981. A self-addressed, stamped envelope is enclosed for your convenience.

Realizing that this is a very busy time of year for you, every attempt has been made to make this evaluation form concise and easy to complete. I shall look forward to hearing from you.

Sincerely,

Trudy W. Banta

Trudy W. Banta
NET Project Director

/pk

Attachment D

THE UNIVERSITY OF TENNESSEE
COLLEGE OF EDUCATION
KNOXVILLE, TENNESSEE 37916

BUREAU OF EDUCATIONAL RESEARCH AND SERVICE

May 21, 1981

Dear Colleagues:

This note is to say thanks to those "Expansion Grant" teams who have returned their "Scrapbook Summary Forms." The information that you have provided will be helpful in planning the future of the Expansion Grant program.

If your team has not completed the form, this note can serve as a reminder. Please do not let the school year end without having evaluated the Expansion Grant program in your school. We need your help to provide an accurate evaluation report.

I wish a wonderful summer for all of you.

Sincerely,

Trudy W. Banta

Trudy W. Banta
NET Evaluation Director

/pk

Attachment E

Part C. Comments

The money should be made available to the teacher and/or manager to spend as cash. We have encountered companies that will take cash or check only - no purchase orders. And since we cannot be reimbursed out of the fund, we had to pass up many opportunities.

We were very happy to share in this program and wish it could continue -- we will find a way!! It is so important! Thanks!

When we consider that little or no awareness would have taken place without the grant -- it was tremendous. Thank you.

Our school found and used a new community resource. Children have shown their understanding of much of the nutrition education presented them, by creating individual posters near the end of the program. We have noticed students choosing to eat more nutritious items in the cafeteria.

I appreciate the money and the materials it enables us to buy. We do get many positive comments from parents concerning nutrition activities that we do. I also feel that this program has brought a change in our total school population toward better nutrition.

I think it is a very good program and will be "on-going"!

We feel that our students and teachers greatly benefited from this program over the past two years, we have certainly become more "nutrition-conscious", we have gained many continuously helpful materials, and it has helped us to better educate our school population (at school & at home).

The expansion grant allowed us to involve parents. This carry-over from school to home was very good. The nutrition games and puzzles to take home were excellent.

We weren't able to carry out all of our plans because of illness in my family. However, we have had a very successful year and plan to improve even more next year. We believe through this program, nutritional information has reached many children, teachers and parents. Thanks.

The items purchased such as filmstrips, books, flannelboard, pictures, etc., will enrich our total curriculum for many years. The program has produced continued learning and active participation by students. We have enjoyed participating in it.

We feel that our total school faculty and staff have actually been one team working on Nutrition Education. Everyone in our school (adults & children) has participated in our NET Program in some way.

We have tried to involve the community as much as possible. We especially tried to do this during National School Lunch Week and by using news articles in the county newspaper.

We have had numerous comments made throughout the past two years as to the improvements made in our lunch programs. Children are eating better!

We feel that the "expansion grant" was very worthwhile.

The program is very valuable in promoting good nutrition in the primary grades.

The children are more aware of what good nutrition is all about.
The parents and children were especially interested in the different snacks that were made from nutrition foods.

Due to our cafeteria manager's departure at semester we were somewhat hampered. However, our new manager has been most cooperative.

The Expansion Grant program aided teachers, managers, administrators as well as students in that we were fortunate to receive additional materials to make the nutritional program a success.

Our first objective was not as successful as we would have liked it to have been. But, we did accomplish alot with the children in the classrooms and lunchroom. Our scrapbook will follow as we still have classrooms in the school doing their nutrition units.

Hope to do better next year (we had two illnesses in faculty). We enjoyed program and think it's worthwhile.

It was not clear to us as to whether we should ask our County Supervisor to purchase the items we had asked for or whether we should buy them and be reimbursed. The Snacking Mouse and the PreSchool Kit were purchased by the 1979-80 Supervisor and were ready for us at the beginning of the year.

APPENDIX E

PROGRAM DEVELOPMENT GRANT SITE VISIT REPORTS

SITE VISIT REPORT

Lynne Roberson

Project Name: Nutrition Education for Children, Ages 3-5 Years

Location: Martin, Tennessee (Facilities in six towns in Weakley County)

Audience: Kindergarten - Approximately 395 children; 19 teachers in 16 centers.

Day Care Centers - Approximately 79 children; 10 teachers in 6 centers.

Contact Person: Mrs. Janice Merryman, Project Director

I. Synopsis of the Project:

A. Purpose of the Project:

To develop a curriculum which acquaints the very young child (3-5 years of age) with basic nutrition through manipulation of actual food items which comprise a balanced diet.

B. Project Objectives:

The following objectives guided implementation throughout the year:

(1) To encourage an awareness of nutritious and proper diet in an effort to improve food selection.

(2) To revise an already developed curriculum aimed at providing children with nutrition education in a format appealing to their developmental stage.

(3) To perfect and package the curriculum for use by teachers in public school systems.

C. Project Plan/Strategy:

Staff development, curriculum revision, and selection of schools and day care centers was conducted during the first two months of the project. Implementation of the curriculum began in October 1980 and continued until May 1981. The curriculum required one week to teach in each of the centers. Evaluation was organized to include a pre-test and post-test of knowledge for all children and a test of retention three months later for children in five centers. Children in an additional five centers comprised a control group in which children received only the pre and post-test. At a date near the end of the project year, these children were taught the curriculum so they too would benefit from the program.

A one-day nutrition education workshop for teachers from centers involved in the project will be offered in June. Analysis and reporting of the results will be completed in June 1981.

II. Basis for Project's Purpose/Objectives:

The needs assessment statement established the relationship between early childhood education about food and the development of eating habits and dietary problems in childhood and adult life. Ongoing communications with the Superintendent of Schools, teachers, and day care licensing personnel indicated a need and a high level of interest in nutrition education.

III. Number, Type, and Qualifications of Personnel:

Mrs. Merryman, the project director, and all project personnel were well qualified for their respective roles. The same personnel worked with the project throughout the year.

IV. Accomplishment of Objectives:

A. Factors influencing implementation:

The project was developed and implemented in accordance with planned project goals and objectives. Success of the project has been attributed, in part, to the high level of commitment of kindergarten and day care center teachers as well as other key personnel in the project and the university community. The kindergarten teachers were in a good position to implement the curriculum in the classroom. A more limited number of day care centers was involved than expected because many centers had too few children in this age range.

B. Summary of instructional methodologies:

(1) Staff development.

Training of the graduate assistants was conducted by Ms. Snider, consultant to the project. Training included trial usage of the educational and testing materials in a situation, as well as guided development of skills in the two centers in close proximity to the project office. Continuous support in the development of understanding and skills was provided throughout the year.

(2) Classroom instruction and assessment.

The curriculum consisted of a plan which required nine days to implement in each center. A pre-test was administered on the Friday preceding the week of instruction. The curriculum consisted of 15 activities, each 15 minutes in length. Three activities were presented each day at three different interest centers. A post-test was administered to all children on the Monday following instruction and three months later to children in one-fourth of the centers.

C. Summary of materials development:

The original materials, developed for use in a master's thesis project, were modified for use in this project. The materials were designed to be appropriate to the developmental characteristics of the children, and the selection of foods emphasized familiar foods, available locally.

D. Individual project outcomes:

A standardized pre-test/post-test procedure was employed to assess knowledge about food. A comparison will be made with the results of pre- and post-tests conducted for children in control groups in five centers for whom instruction was deferred. A comparison will also be made with the results of subsequent testing for retention of knowledge after three months for children in a fourth of the centers. In May, a survey questionnaire was mailed to all kindergarten and day care center teachers who participated in the project. Teachers were asked to evaluate the organization, presentation, developmental appropriateness, and other dimensions of quality of the curriculum by rating 17 items using a Likert-type scale (strongly agree-disagree). Open-ended questions about the strengths, weaknesses, and impact of the curriculum were included. The results of this survey will be included in the final project report.

E. Nature of parental/community involvement:

Parental consent forms were required to enable each child to participate in the testing and instruction. Teachers assumed responsibility for securing parental consent. Children were encouraged to share their experiences with their families. Anecdotal reports and requests for public information indicated widespread interest among the families and the community.

V. Summary and Recommendations:

A. Project recommendations:

A limited number of suggestions which pertained to preparing the final report were made.

B. Relationship to State NET Goals:

This project was reviewed in relation to the stated objectives for the project. The State goal which pertains to the education of children about the relationship between nutrition and food choice (Goal I) is being addressed.

C. Other comments:

The Superintendent of the Weakley County School System has indicated an interest in the development of nutrition education in kindergartens throughout the county in the future. The food service department has agreed to consider the means by which to obtain food for the curriculum activities. A one-day workshop for teachers of children who participated in this year's program will be provided in June by project staff. Objectives and strategies are being planned now. The need to identify local perspectives in curriculum development was discussed. Several aspects of the nutrition education curriculum which need to be considered in light of local curriculum planning mechanisms were identified.

Personnel in this project have enjoyed the interest and support of the children, their families, the schools and day care centers, the community, and the university. It was a good beginning and has important implications for the future of nutrition education.

Site Visit Report

Lynne Roberson

May 15, 1981

Project Name:	Nutrition Education - A Positive Approach
Location:	School of Home Economics, Tennessee Technological University, Cookeville, Tennessee
Audience:	Children in Grades K-12 in approximately 100 public schools in the Upper Cumberland Region.
Contact Person:	Dr. Cathy Baker, Project Director

I. Synopsis of the Project

A. Purpose of the Project:

The purpose of the project was to provide incentives to students for making better personal food choices and to improve the quality of food served in public schools in the fourteen counties of the Upper Cumberland Region.

B. Project Objectives: The first four objectives provided direction in project development from the beginning. The fifth objective was added in the developmental process.

(1) Students will learn to identify the nutrient contribution of foods they consume, relate these nutrients to their health benefits, and thus make more responsible personal food decisions.

(2) School food service supervisors, managers, workers and teachers will learn more about the nutrient composition of the foods they serve and its relation to health.

(3) School food service personnel will improve production techniques to maximize nutrient retention and taste appeal of food served.

(4) School food service personnel will participate in a one-day exposition to see what other managers and supervisors are doing to use the school cafeteria as a setting for a nutrition education laboratory.

(5) Determine the developmental level required to understand the concepts presented in nutrition education materials (profile cards).

C. Project Plan/Strategy

(1) A two-day conference was conducted at Tennessee Technological University for school food service personnel on food preparation and sharing results of past projects by teacher/manager teams.

(2) A kit of educational materials was disseminated at the conference. The kit included a package of profile cards which portrayed the nutrient value of regional foods commonly served in the school breakfast and lunch programs along with a variety of ideas which could be utilized in the instructional program.

(3) A test of a small group of children will be employed to determine the developmental level of nutrient profile cards.

II. Basis for Projects Purpose/Objectives.

A. Needs Assessment prior to the project.

Information on participation in school feeding programs and the extent of current education for children and school personnel was considered. Limited nutrition surveillance data provided by the Regional Public Health Office was available.

B. Summary of needs assessment findings.

Participation in the school lunch programs varied from 40 to 99% (March 1980) throughout the 14 county area. Average breakfast participation was 41% in 35 schools. An estimated 27.1% of the population in the Upper Cumberland Region are impoverished (1970 census). Many children receive free or reduced price meals.

Routine nutrition surveillance of school aged children served by the Regional Public Health Office in the 4th quarter of 1978 showed 12% were over the 95th percentile in weight/height and 15% had low hematocrit levels.

Nutrition education is included in home economics in junior and senior high school as well as in 3rd and 4th grade (the latter is provided in cooperation with the Tennessee Agricultural Extension Service).

C. Relationship among agencies:

Four agencies with mutual interest in the nutrition education of school aged children were identified - the public schools, the public health department, the university extension service, and Tennessee Technological University. These agencies have interrelated some services for the children.

III. Number, type, and qualifications of personnel.

Dr. Cathy Baker, Project Director, has academic preparation and teaching experience in higher education in the area of foods and nutrition. She has participated in the development of nutrition education in the public school system in the Upper Cumberland Region.

IV. Accomplishment of Objectives.

A report on the usage of the nutrition kit is being solicited from food service managers in each of the 14 counties at this time. A detailed analysis of this information will be included in the final report.

A. Factors influencing implementation.

The project director noted that implementation of the nutrition kit was hampered by the limited time available for food service managers to provide direction in program development and to participate in activities. It was suggested that greater participation may be achieved where teams of teachers and food service personnel were trained together and nutrition education is an integral part of the instructional program. These observations will be amplified in the final project report.

B. Summary of instructional methodologies.

The main strategy for dissemination of information was a two-day education conference in August at Tennessee Technological University. The conference was attended by approximately 2,000 people in 21 counties. The nutrition workshop was attended by food service personnel from each of the 14 project counties. Approximately 50-60 kits were distributed to representatives of the 100 schools included in the project. The nutrition workshop was also attended by several teachers and two public health nutritionists from the area. The program included representatives from the State Department of Education N.E.T. program and the regional public health department. For one half day of the conference the N.E.T.S.W. teacher-food service manager teams shared the results of their work. (Twelve teams from 14 counties were originally trained. Several have left their positions and several are involved in this project.) Examples of nutrition education activities (principally integrated into art, language, and geography in the elementary schools) were discussed. The results of evaluation forms submitted by 30 of the people who attended the nutrition conference indicated that the session on nutrient retention of foods, which included demonstrations of the preparation of foods used in the school lunch program, was particularly well received.

C. Summary of material development.

The kit distributed at the conference included a variety of materials which can be utilized in the school lunch room or adapted for use in the classroom. For example, ideas for public announcements and posters; profile cards which display the percent U.S.R.D.A. for selected nutrients for foods commonly served in the school feeding programs; a form to evaluate plate waste; and a test at the eighth grade level which can be used as a pre- and/or post-test of knowledge. The ideas or techniques for nutrition education are presented so that teachers may make the judgment about the appropriate developmental level for the children.

D. Individual project outcomes.

The nutrition education workshop was evaluated by 30 of those who attended. The results indicated a commitment to apply the ideas introduced in the schools.

The plan for the evaluation of the impact of the dissemination of information through the conference and kits was to record anecdotal information on the use of the material through usage reports. In schools where profile cards were displayed on the serving line, data on the frequency of use of the food item and the number of students served was to be recorded by food service personnel. A report of usage of the nutrition kit may provide some insight regarding the way in which nutrition education was provided in the school lunch room and classroom. Preliminary observations suggest that there was more systematic development occurring in schools with grades K through six than seven through twelve.

There is a plan to evaluate the developmental level of the profile cards included in the nutrition kit using approximately 25 children under 10 years of age. This information will be included in the final report.

E. Nature of parental/community involvement.

There was no information reported regarding this component.

V. Summary

A. Project recommendations and corresponding changes.

The final report should include descriptive and anecdotal information which will provide insight regarding the impact of this approach on the development of nutrition education in the Upper Cumberland Region.

B. Relationship to the overall State plan.

All four goals of the State N.E.T. plan were addressed in some way.

Site Visit Report

Lynne Roberson

May 18, 1981

Project Name:	Jones Elementary School N.E.T. Project
Location:	Lewisburg, Tennessee
Audience:	Twenty-six students identified as multihandicapped, mentally retarded, or learning disabled who attend the Child Development and Vocational Advancement Program (age 8-21 years) and 60 students with learning disabilities (Grades 5-6).
Contact Person(s):	Ms. Ann Hatley, VAP Teacher-Nutrition Director Ms. LaDella Smith Ms. Mary James Adams, Principal

I. Synopsis of the Project.

A. Purpose of the Project.

To address the needs of multi-handicapped and learning disabled students at Jones School. These nutritional needs are related to the student's socio-economic level, individual health problems, individual learning capabilities and individual survival.

B. Project Goals.

The following goals have guided project development throughout the year:

(1) To teach the multi-handicapped and learning disabled student what they should eat to be healthy.

(2) To teach multi-handicapped and learning disabled students independent living skills on individual basis.

(3) To involve parents in the nutrition program throughout the project.

(4) To develop and write a nutrition education curriculum that can be used or adapted for the multi-handicapped or learning disabled student.

(5) To develop and prepare teacher in-service/staff development activities relating to concept setting, nutritional curriculum methods, and curriculum materials for five resource teachers at Jones School.

(6) To conduct a county-wide nutrition workshop for all elementary teachers in the Fall of 1981.

C. Project Plan/Strategy

Curriculum development and evaluation. With direction and assistance from the project director, five resource teachers participated in goal setting, development/selection of instructional strategies and materials, and evaluation. Learning skills for independent living had priority in the curriculum.

Staff development. Inservice education for the five resource teachers, aides, and 5th and 6th grade teachers was conducted. In addition, inservice education for classroom teachers Grades K through 12 throughout Marshall County was planned for Fall, 1981.

Parent involvement. Orientation and an invitation to participate in classroom activities and field trips was planned. Parents also participated in the advisory committee and will be queried regarding observations of the children's learning through multi-team conferences.

II. Basis for Project's Purpose/Objectives

A. Evidence of needs assessment prior to the project:

An appraisal of the needs of the children based on information available through the special education program, the parents and the county health department was included.

B. Summary of needs assessment:

The Child Development and Vocational Advancement Program serves 26 students (age 8-21 years) who are identified as multi-handicapped, mentally retarded or learning disabled. Approximately 60 students (Grades 5 and 6) with learning disabilities are also reached. Several children have special diets; both under- and over-weight exist among the children; 60% of the learning-disabled students come from low income families. The children lack the knowledge and skills to select and prepare nutritious snacks and meals.

III. Number, Type and Qualifications of Personnel

Mrs. Ann Hatley, who directs the project, has had academic preparation in home economics with a major in foods and nutrition. In addition, she has had experience working with both adults and children through the U.T. Extension Service and with multi-handicapped, mentally retarded, and learning disabled students at Jones Elementary School.

IV. Accomplishment of Goals

A. Factors influencing implementation.

The development and implementation of the curriculum occurred as planned. Project support for purchasing equipment and materials enabled the staff to organize learning centers in which students engaged in assigned activities. In addition, the staff procured a variety of materials which were adapted for use in the project. The most important factor influencing the development of the curriculum was the understanding, skill, and high level of commitment of the project director, the principal, and the staff.

B. Summary of instructional methodologies.

(1) Inservice education was conducted at the beginning of the year for the resource teachers, one vocational teacher and aides who worked directly with the children during the year. Other interested teachers also participated. Continuous support and guidance was provided to participating personnel throughout the year by the project director.

(2) The curriculum plan consisted of specific objectives and learning activities written in advance. General objectives were written to address the needs of all children and the tasks (learning experiences) were selected for the individual child - i.e., the level of difficulty of the task was adapted to the developmental level and characteristics of the child. A pre- and post-test for units which addressed objectives on the classification of food was included. Learning experiences were both separate units and integrated into other learning activities in conjunction with language arts, math, and independent living skills. Learning is reinforced in daily tasks which comprise the development of independent living skills.

C. Summary of material development.

Materials developed for use in the project included descriptive information about the curriculum and instructional materials, some of which were materials adapted for use in the project. The descriptions of the curriculum to be submitted with the final report will be organized around the ten major learning objectives and will be labeled to indicate the developmental level of the children with whom it was used.

D. Individual project outcomes.

A pre- and post-test of performance was included for each child. Observations by classroom teachers and parents provided anecdotal information for use in assessment. The Marshall County Health Department Public Health Nurse assisted the staff in the evaluation of health status including growth, development, and the occurrence of anemia. The results of these assessment measures will be included in the final report.

E. Nature of parental/community involvement.

Information about the project was disseminated at a P.T.O. meeting in April which included teachers, parents, and the children (who assisted with hospitality). Effective involvement of parents has been achieved through sharing the results of overall development including nutrition, in multi-team conferences with parents periodically. An individual appraisal of the child's accomplishments is discussed with parents and objectives planned accordingly.

The program utilizes the resources of the public health nurse from Marshall County Department of Public Health and parent trainers from Cloverbottom Department of Mental Health and Mental Retardation who do home visits on referral by teaching staff. Working with these personnel, the parents, as well as the children's pediatricians (all from Nashville), special dietary and nutrition problems are addressed both at home and at school.

V. Summary

A. Project recommendations and corresponding changes.

Future plans were discussed with project staff. It is anticipated that continued efforts will be devoted to the nutrition component of the curriculum.

B. Relationship to overall State plan.

This project addresses three of the State N.E.T. program goals, including the nutrition education of children, staff development, and the development of curricula and materials. Links have been forged with the food service personnel.

C. Other comments.

This project was unique in its devotion to children with special needs, its emphasis on individualization, and the conscientious attention to details in implementation by everyone involved. The staff are to be highly complimented for this very successful endeavor.

SITE VISIT REPORT

CHERYL BITTLE

Project Name: Loudon County Program for Nutrition Education and Training Project

Location: Loudon County, Tennessee

Audience: Aproximately 14 teachers, 16 food service personnel, 50 students and 750 parents involved in grades K-3 in Greenback and Philadelphia schools.

Contact Persons: Ms. [illegible] Driver, Project Director
Dr. Gail Disney, Project Director

I. Synopsis of the Project

A. Purpose of the Project

After completing the sequential nutrition education program the student will be able to understand relationships of food and nutrition to health and exhibit sound dietary practices.

B. Project Sub-Goals:

(1) To achieve school, home and community support for a cooperative, coordinated nutrition education program.

(2) To develop/assemble and disseminate teaching strategies in nutrition education for a sequential program.

(3) To provide teachers and school food service personnel with accurate and current information about nutrition and health.

(4) To assist teachers and school food service personnel in coordinating nutrition education efforts and in utilizing the Child Nutrition Program effectively.

C. Project Plan/Strategy

The instructional plan developed at UTK in 1979-80 was tested in grades K-3 in two Loudon County schools. Two schools (Highland Park, and Stackee) were utilized as control schools. A workshop for teachers, school food service personnel and administrators was conducted at the beginning of the school year. Regular ongoing communications with these personnel were an important dimension of project management and inservice education.

Parents were reached through communications transmitted by the children, and they were encouraged to participate in classroom activities. A pretest and posttest of knowledge, attitudes, and behavior was administered to both program and control children, teachers, parents, and school food service personnel. An active dimension for promoting public awareness (including other agencies) was included.

II. Basis for Project's Purpose/Objectives

The socioeconomic characteristics, health problems, educational needs and developmental readiness of children in this age range were taken into consideration in educational development. State data indicated that teachers and food service personnel need additional education to prepare them to achieve program goals. Collaborative relationships with other agencies which serve this age group existed and were promoted.

III. Number, type and qualifications of personnel.

Dr. Disney has had extensive experience in the field of nutrition including research on the health and nutritional status of children, and teaching at UTK. Ms. Driver is completing a Master's Degree in nutrition at the University of Tennessee. She participated in the development of the instructional plan at UTK in 1979-80 and is concurrently employed as the Food Service Director in the Loudon County school system.

IV. Accomplishment of Objectives

A. Factors influencing implementation:

Objectives (sub-goals) for the project have been achieved. The data from the pretest and the posttest has been entered into the computer. Data analysis will not be completed until late June. An extension of the deadline to submit a final report has been requested and granted.

An assessment of parental comments was obtained via a one-page questionnaire. Comments ranged from positive to negative; however, the negative comments were related to a lack of understanding about the program. Greater parental involvement would be a recommendation for the project in the future.

B. Summary of instructional methodologies:

Previously mentioned constraints concerning lack of time to meet with school lunch personnel for inservice education continued Throughout the project year. The educational activities were brief and limited in content for school lunch personnel. The comments from the school lunch personnel about the sessions were positive. Teachers and the school food service manager continued periodic meetings. The food service director facilitated interaction between school classroom activities and the school lunch program.

Summary Results of Project:

Teachers who participated this year will aid in the development of an inservice education session for faculty in the fall orientation for all teachers. All the teachers who participated this year plan to continue

Summary Results of Project (Continued):

the use of the nutrition curriculum in the next school year. Comments from the teachers were very positive. The integration of the nutrition materials into ongoing activities was well accepted; and teachers felt more comfortable with the curriculum materials after a year of participation.

The relationships between the school lunch personnel and teachers were strengthened. All are interested in the best opportunities for the students, so they will work together within the limitation of reduced resources in the coming year.

The posttest (as was the case with the pretest) of knowledge, attitudes and behavior presented problems for the younger children. Four alternatives were difficult for the kindergarten child to distinguish. The test design will be assessed when the computerized data are evaluated.

Participation by parents dropped as the year progressed. After data are combined, significance will be assessed as participation decreased greatly within certain groups.

Initiation of a Nutrition Council for the county will be pursued by an interested group. The Farm Bureau Women will assume leadership in the development of the Nutrition Council, possibly within the next year.

Concluding Remarks:

This project has been conducted effectively, and the results of data analysis should give objective information about the effectiveness of nutrition education integration into the school system. Both project directors are committed professionals with many skills available to the public education system. There has been a strong commitment to develop a locally-controlled, self-contained project. Continuation of the activities will be possible because Mr. Driver is the School Lunch Director; however, financial constraints will limit expansion of the program. With continued administrative support, the program will present a unique nutrition education program which may be of interest to other local school systems.

SITE VISIT REPORT

Cheryl Bittle

Project Name: A Team Approach to Nutrition Education in Hamilton County Schools

Location: Hamilton County, Tennessee Chattanooga, Tennessee

Audience: Six teams consisting of a Home Economics teacher and Food Service Manager from middle, junior, and high school programs within the Hamilton County school system serve as facilitatores to the potential audience of approximately 3,000 students, 750 parents, and 50 school food service personnel.

Contact Person: Mrs. Jean Smith Trohanis, Project Director

I. Synopsis of the Project:

A. Purpose of the Project:

The Project is designed to:

(1) provide nutrition knowledge and improve eating habits of participating students, 10-17 years of age;

(2) increase skills and interpersonal relationships among the teacher and food service managers;

(3) make the school lunch program a component of the nutrition education program in the schools.

Other purposes include the development of parent and community support for the school lunch program in Hamilton County. The project is a pilot of team development utilizing the teacher and the food service manager in an education endeavor.

B. Project Objectives:

The major objectives of the project are:

(1) To increase nutrition knowledge of students in Hamilton County Junior, Middle, and High Schools and to effect positive attitudinal and behavioral changes in the eating practices of this group.

(2) To make the Hamilton County School Food Services Department an integral part of the nutrition education program in the targeted schools.

(3) To increase nutrition knowledge of teachers and school lunch managers.

(4) To strengthen interpersonal skills of teachers and school food service managers so they will work together effectively as a nutrition education team.

(5) To develop a nutrition education program that can be implemented system-wide.

(6) To stimulate community interest and support for a comprehensive nutrition education program and the School Lunch program in Hamilton County.

Project Status Report:

This visit by telephone was a follow-up of the initial visit in December. Telephone conversations were held on June 10,1981, after a preliminary conversation on May 17, 1981. The project has undergone several changes since December. The project director is Mrs. Jean Smith Trohanis. The responsibilities for Alice Yeldell did not allow her to continue after mid-February, 1981. The project is completing all responsibilities under the direction of Mrs. Smith Trohanis. She has assumed complete responsibility for the project after the mid-year changes.

Numbers in the following section indicate the relationship between the objectives stated above and the accomplishment of the activities.

(1,2) At the completion of the school year, students in all six schools had completed the activities included in the curriculum module developed by their Home Economics teacher. The module was the final assignment from the one week course held during August, 1980. Each teacher submitted her module to Mrs. Jane Teeter, instructor for the summer course for evaluation during the month of December. After the completion of the review, the modules were returned to the Home Economics teacher and she used the module in the classroom activities during the Spring term. Modules were duplicated and copies were available for exchange among the six participating teachers. After participation by students in the planned activities according to their individual module, each teacher submitted final reports to Mrs. Smith Trohanis. * Results are summarized:

*Each module contained an activity related to the second objective which is integration of the school food services into the nutrition education program in the targeted schools.

The results are summarized below:

The most important result was the introduction of the students to the school cafeteria. The presentation by the school lunch manager and the subsequent activity in which students planned a meal using the criteria for school lunch developed an appreciation among the students of the constraints the cafeteria personnel encounter in offering quality food within the guidelines.

The second activity was the evaluation of the impact the nutrition activity had on the students' eating patterns. Students participated in a recall activity in which they recorded a lunch consumed prior to the nutrition module and consumption of the same lunch menu after completing the nutrition module.

Three of the schools showed an increase in the number of students who consumed a balanced lunch or more lunch items. A number of students skipped lunch altogether. One school showed a decrease in balanced lunch consumption; however, a test of the significance of the raw data has not been done. All comments are made on the data as collected.

Subjective comments from the teachers reflect an improved relationship with the school lunch staff. All six teachers reported that a better relationship with the school lunch staff had been achieved as a result of the activity. All teachers felt that the school lunch program had served a valuable part in the educational activity during the year. (The project director received an oral comment from a principal that the school lunch program gained a strong defender in the home economics teacher as a result of the pilot nutrition education program.)

All six food service departments served as sites for field trips for students in the program. The school lunch managers participated in a classroom discussion and presented information to the students in a formal discussion.

(3) Curriculum modules developed as the final assignment by the teachers continued to be utilized throughout the year. The use of the modules, which included activities with students by the Food Service managers, served to increase the knowledge of the teachers and managers as they worked together in the class activities.

(4) The objective related to interpersonal skills continued to be developed. Initial skills were learned in the summer workshop and completed the objective; however, the actual implementation of the curriculum module served to strengthen the skills by use in the nutrition education activities.

Both teachers and school lunch managers report they they have retained the skills and relationships developed during the workshop. All final reports from the teachers contained positive comments about the school lunch program in the school system. Teachers plan to integrate the school lunch program as much as possible into the curriculum plan for the coming year. Staff changes in the central office as well as curtailed resources may limit the scope of activity for the coming year.

(5) Due to the changes in finances for the coming year for the system, this objective will not be addressed. Funding limitations are such that continuation will be very limited. Project personnel hope that the school system will be able to provide minimal support for some nutrition activity during the next school year.

(6) Activities during National Nutrition Month included displays in the school cafeteria and school posters. All six schools participated in the poster development in the school cafeteria. One newspaper article appeared during the month but did not specifically mention the pilot project; however, it did feature school lunch activities.

The thrust of the project was the utilization of learning modules by the six teachers in the classrooms. Changes in eating patterns as evidenced by better consumption following the module was one criterion for evaluation. Positive results were obtained from or among a majority of the school students who participated. It was shown that the students did improve selection of foods from the menu after the completion of the nutrition module. All six schools have submitted final reports to the project director. She is in the process of tabulating results and developing a summary statement.

Due to the responsibility of completing the project, Mrs. Jean Smith Trohanis was named project director mid-year. She completed site visits to all six schools during the month of February. She assessed the progress of the teachers in the completion of the nutrition project mid-year and will complete the final report.

The major change from the previous report is the designation of Mrs. Jean Smith Trohanis as project director. She has been the individual responsible for the completion of the pilot project in Hamilton County.

Summary:

The project was completed, and the final report will be written and submitted to the State Education Office-Nutrition Section by June 30, 1981.

The project did identify a method to teach children 10-17 years of age. Students in six different schools received nutrition information which was evaluated by tests and food record activities. The project provided resources and guidance for six teachers in the development of a learning module combining both nutrition knowledge and school lunch activities. Success of the project is measured by the comments from the teachers that next year they will be able to continue the activities in conjunction with the school lunch program. The teachers will be able to utilize the resources purchased with the rollover funds from the project. The projected plans for the coming year are dependent upon the funding available to the system. Activities will be limited because funding for the year has been severely curtailed.

APPENDIX F

RCCI WORKSHOP EVALUATION FORM

WORKSHOP EVALUATION

Workshop Location: ____

Type of RCCI Represented: _________________________________

Your Classification (Please Check Appropriate Response):

____ Administrator ____ Teacher

____ Food Service Staff ____ Other (Describe Briefly) ____

____ Houseparent __________________________

1. How would you rate the training and usefulness of the workshop?

____ Excellent ____ Good ____ Fair ____ Poor

2. What was of most value to you?

3. What was of least value to you?

4. Suggestions for future workshops:

Improvements

Topics Desired
(Related to nutrition education and food management)

Workshop Evaluation Continued
Page 2

5. What is your team plan to improve nutrition education offered in your center this year? (October, 1980 - May, 1981)

Your Name: ______________________________

Name of RCCI: ______________________________

RCCI Address: ______________________________

____

Check Your Position:

____ Administrator

____ Food Service Staff

____ Houseparent

____ Teacher

____ Other (Describe Briefly) ____

____

APPENDIX G

RCCI WORKSHOP FOLLOW-UP EVALUATION FORM

THE UNIVERSITY OF TENNESSEE
COLLEGE OF EDUCATION
KNOXVILLE, TENNESSEE 37916

BUREAU OF EDUCATIONAL RESEARCH AND SERVICE

April 27, 1981

MEMORANDUM

TO: RCCI Participants in October 1980 Nutrition Education Workshops

FROM: Trudy W. Banta, Director, State Nutrition Education and Training Project Evaluation

Ms. Helen Minns, Director of Tennessee's Nutrition Education and Training Program, has asked me to write to you about the nutrition education workshop you attended last October (1980). The workshop was designed to give you information to help in planning services for children and to help solve problems. At this time, Ms. Minns would like to know if the workshop information and activities were helpful to you and your staff.

We would appreciate it if you would fill out the enclosed form. Only one form is provided; therefore, if others attended the workshop with you, please put all of your comments together on a single form. Attach additional pages, if needed.

Please return the form in the enclosed envelope by May 12 (two weeks). Thank you for your willingness to help us evaluate the value of the workshop.

/pk

Enclosures

EVALUATION OF THE OCTOBER 1980 NUTRITION EDUCATION WORKSHOP

1. Please describe the changes (if any) in services to children that you and your staff have made as a result of your participation in the nutrition education workshop. (List and describe the change(s)).

2. How did the nutrition workshop help you in making these changes in services for children?

Please complete and return by May 12 to:

Dr. Trudy W. Banta
Bureau of Educational Research and Service
212 Claxton Education Building
Knoxville, TN 37916

NAME ____________________

INSTITUTION ____________________

APPENDIX H

"SOUP TO NUTS" EVALUATION FORM

School______________________________

County______________________________

School System________________________

"Soup to Nuts" Evaluation

1. Which grade(s) do you teach?______________________________
2. With which grades did you use "Soup to Nuts"?________________________
3. How many of the lessons in the series did you use with your students?____________
4. Approximately how many students viewed these lessons under your supervision?________
5. Did you attempt to evaluate the impact of the series on your students? ☐ Yes ☐ No

   If yes, please describe the evaluation.______________________________

   ____

   ____

   (If you used pre- and post-tests, please attach a separate sheet listing the pre- and post-test scores without student names.)
6. The "Soup to Nuts" teacher's guide states five major goals for the series. Please rate the goals on the chart below according to how well you think each was met.

	Poor 1	Fair 2	Good 3	Very Good 4	Excellent 5
Goal 1: To acquire sound knowledge of nutrition concepts, principles, and facts.					
Goal 2: To make food choices that satisfy individual needs and values, yet consider many influencing factors.					
Goal 3: To apply nutrition knowledge in specific decision-making situations.					
Goal 4: To use school breakfast and/or school lunch programs (Child Nutrition Programs) as learning laboratories for nutrition education.					
Goal 5: To evaluate personal eating habits and follow good nutritional practices that can result in a healthier and more productive life.					

7. What did you consider to be the best features of the series? The worst?__________

   ____

   ____
8. Would you recommend this series to other educators? ☐ Yes ☐ No

   Why or why not?____

   ____

   ____

APPENDIX I

COPY OF THE GOODY BAG

Nutrition Newsletter for Elementary Teachers

The Goody Bag

022-00010
02-81-030M

Published by The Nutrition Education & Training Program / Tennessee Department of Education

VOLUME 3 SCHOOL YEAR 1980-81 No. 3

MARCH—NATIONAL NUTRITION MONTH

The 1981 theme is, "Pep Up Your Prime Time . . . Exercise, Eat Right, and Enjoy." This is the American Dietetic Association's (ADA) second annual National Nutrition Month and its ninth annual national nutrition focus.

The purpose for this year's theme is to provide to the general public a national focus on nutrition and fitness—tied together—offer promise of a longer, better life for everyone, young and old, and at every season of life.

"NUTRITION TIC TAC TOE"

General Objective: To review basic concepts taught.

Student Objective: The student will demonstrate knowledge of nutrition concepts by answering the questions correctly.

Approximate Grade Level: This will depend upon the list of questions asked and correct answers respondent is expected to give.

Number of Players: Three
or - a group who makes questions and answers and act as MC's
- a group to represent X
- a group to represent O
or - just however one chooses

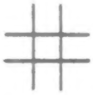
Materials Needed: Plain paper or blackboard, pencil, chalk (with a scorekeeper)

**Feel free to be innovative, and do your own thing!*

Description of Game: There are three players (or however one chooses to divide students) for this game, two contestants (or two groups, etc.) and an MC (and maybe even a scorekeeper).

Procedure for Playing:

1. Draw four lines on a piece of paper (or whatever one chooses) as follows:



2. One player (group) uses an X, the other an O.
3. A list of questions with answers is given to the MC. (These questions are to come from nutrition materials taught in the classroom.)
4. The two contestants (groups) alternate answering.
5. The first player (group) is asked a question. If he/she/they answers correctly, he/she puts an X in the square of his/her (group) choice. If he/she does not know the answer, he/she does not get an X.
6. The second player (group) is asked a question. If he/she knows the answer, he/she (group) places an O in the square of his/her (group) choice.
7. The game continues until one player has three X's or O's crosswise, vertical, or diagonal. He/she (or group) is the winner.

Suggestions for Using Games

*(Adapted from: **Fun & Learn Nutrition Games.** Dr. Fannie Lee Boyd, Associate Professor, Division of Vocational Education, University of Georgia, Athens, Georgia 30602)*

The use of games as a teaching procedure can be very effective if it is planned in relation to the objectives of an overall unit of study, conducted and evaluated to assess the students achievement toward pre-determined goals. Playing a game may be fun but the teacher is responsible for guiding students to apply what they have learned.

Games can be used for many different purposes. They may be used to stimulate interest, to gain information, to apply principles, to analyze situations and make judgements, to review material covered previously, and to evaluate learnings.

Some competition will naturally occur in using games. However it should not be accentuated and encouraged. Learning and individual growth should be the central focus.

Facts and generalizations should be checked to see that they are accurate and up-to-date. They should also be reviewed to see that they relate to the objectives. Non supervised or unguided games can become purposeless. The purpose for using the game should be clear both to students and the teacher.

Time to assess what has been learned is most essential. This may be done by use of checklist, tally scores, statement of generalizations, use of questionnaires and surveys, observing students interest and practices, listening to comments and questions. The use of grades should be de-emphasized. Students may request a test to find out what they have learned or whether they are reaching their objective. But the tests are not for grades thereby eliminating the threat factor.

There is a certain amount of insecurity in changing dietary practices and accepting new information. Support, encouragement, tolerance, understanding and a friendly happy environment is more conducive to success than one that is rigid and threatening. The use of games, simulation, role playing and case situation takes pressure off the individual. However, the student should be able to identify with the technique being used and adapt the information to his personal situation.

If you wish to purchase a copy, it may be obtained from:

Dr. Fannie Lee Boyd
Department of Home Economics Education
College of Education
University of Georgia
604 Aderhold Hall
Athens, GA 30602

Price: $3.50

THE "COOK'S CORNER" IN YOUR CLASSROOM

By: Smell, Touch, Listen, Look . . . Kids Learn, Kids Cook! University of Wisconsin—Stout; Project Director: Judith Herr; U.S.D.A.-N.E.T. Program Grant

An early childhood teacher who integrates cooking experiences into the classroom curriculum is always concerned with minimizing potential health and safety hazards and maximizing learning. Some helpful "hints" for classroom cooking include:

1. Pick a special place that's away from the mainstream of classroom activity. If you plan on doing a lot of classroom cooking, the place you choose could permanently become your "Cook's Corner."
2. Protect your table by covering it with a flannel-backed plastic tablecloth or oilcloth (sold by the yard at most fabric or variety stores). The flannel backing helps to keep the tablecloth/oilcloth from slipping.
3. Work with only a small group of children at a time. If you wish to work with only four "cooks," have just four aprons available. Older children enjoy writing a formal waiting list, but numbered beads on elastic "bracelets" make waiting easier for the younger child to understand.
4. Have the recipe, ingredients, clean-up supplies, and utensils ready on a tray **before** you begin. If a parent/volunteer unexpectedly drops in, you'll be prepared to enlist their on-the-spot assistance.
5. If using recipe cards, keep instructions short, clear, and sequential. Picture symbols, food labels, numerals, single words and short phrases make recipes easy for a young child to "read."
6. Washing hands in hot, soapy water and wearing aprons is important "health insurance" for **all** cooks.
7. Other health and safety precautions:
    a. Use plastic serrated knives, tongue depressors, or small, sharp (not dull!) knives to cut with.
    b. Cut on cutting boards.
    c. Cut by sawing instead of chopping.
    d. Cut slippery, round vegetables in half lengthwise to provide a flat cutting surface for the child.
    e. Tasting is reserved for "tasting spoons" only. (You can "color code" your cooking spoons by dipping the handle in red paint or nail polish.)
    f. Minimize clean-up difficulties by having a sponge and wipe-up rag handy for spills.
    g. When using a heat source to cook with, **always** have constant adult supervision!!!

    h. Code all heat sources with a symbol—a bright red flame (painted on with fingernail polish) immediately conveys the message "HOT!" to children.
    i. Provide a hand rest for the extra hand when children are cooking with a heat source.
    j. Avoid recipes that require deep fat frying or that have the potential for hot grease spatters.
    k. Glass ("see-through") saucepans enable the children to safely see the food as it is cooking.
8. Necessary cooking equipment is determined by your center's facilities and your curriculum.
9. Cooking with young children is merely food preparation and serving. A cooking experience may be as simple as washing raw vegetables or as complex as baking whole wheat yeast bread. (We even "cook" with infants and toddlers—peeling and sectioning oranges or stirring up a batch of instant pudding!)
10. Repeated successful experiences build a child's self-confidence. Slight variations may rekindle interest.
11. Expand cooking experiences to include stories, dramatic play, science, math, and experience charts before and after cooking.

WRITTEN CONTRIBUTIONS WELCOMED!
Send to: *Mrs. Charlotte Pearson*
Tennessee Nutrition Education & Training Program
Cordell Hull Building, Room 133
Nashville, TN 37219
PLEASE NOTE THE NEW ADDRESS!

"No person shall be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity of the Tennessee N.E.T. Program on the grounds of race, color, sex, age, national origin, religion or handicap."

Authorization #1114; 30,000 copies printed. "This public document was promulgated at a cost of $254.65 or $0.0085 per copy to disseminate sound nutrition education to elementary teachers."

APPENDIX J

TENN COMPETENCY WORKSHOP EVALUATION FORM

NUTRITION EDUCATION OBJECTIVES PROJECT

Workshop Evaluation

The purpose of this evaluation instrument is to give feedback concerning the nutrition education workshop. This information will be used to improve future workshops. Thank you for your participation.

I. BACKGROUND INFORMATION

Date____________________

Position__________________

National Origin: Check one

2 American Indian/Alaskan Native
0 Asian/Pacific Islander
14 Black
0 Hispanic
150 White

II. WORKSHOP USEFULNESS

Please indicate the extent to which you agree or disagree with the following statements. Use the scale listed below. Place an "X" in the block which corresponds to your opinion.

SA = Strongly Agree
A = Agree
NS = Not Sure
D = Disagree
SD = Strongly Disagree

N=166	SA	A	NS	D	SD
A. I felt the organization of the workshop was conducive to learning.	62%	38%			
B. I learned many new ways to integrate nutrition education into the existing school program.	38%	61%	1%		
C. The information presented was interesting and informative.	67%	30%	2%	1%	
D. The nutrition activities presented were interesting and informative.	59%	40%	1%		
E. Adequate time was allowed for my comments and questions.	67%	30%	2%	1%	
F. I gained sufficient knowledge to be able to use the instructional plan.	42%	53%	5%	1%	
G. I believe that the plan will be very useful to me in incorporating nutrition education into the school program.	56%	38%	5%	2%	

(over)

II. GENERAL COMMENTS

A. Which workshop activity was the most valuable to you?

____

B. Which workshop activity was least valuable to you?

____

C. What suggestions do you have for workshops of a similar nature to be held this summer?

D. Other Comments:

APPENDIX K

ASSESSMENT SCHEDULING MATERIALS

Time Schedule for NET Assessment

Spring 1981

Evaluation Activities	Target Dates	Personnel
Examine instruments and make necessary revisions	December 1980	Jo Lynn, Jean, Karen and Margaret
Send contact letter to School Food Service Supervisors	December 1980	Margaret
Develop guidelines for field assistants (guidelines will include assessment instructions and coding and travel information)	January 1981	Margaret, Wilma, Karen
Send contact letters to school principals	January 20, 1981	Margaret
Develop rating scale to be used in interviewing prospective field assistants	January 1981	Wilma, Karen, Margaret
Field test instrument revisions (Food Consumption Instrument)	March 1981	Margaret
Obtain lists of substitute teachers from area school principals	March 1981	Trudy
Contact schools by letter to set up date for testing and ask contact person what nutrition education materials (if any) have been received by the school	March 1981	Margaret
Contact prospective applicants for field assistant positions	March 1981	Margaret

Evaluation Activities	Target Dates	Personnel
Interview applicants for field assistant and technical assistant positions	March 1981	Trudy, Karen, Wilma and Margaret
Duplication of Instruments	March 1981	Margaret
Contact TENN competency personnel for information concerning teachers who participated in the NET assessment in Spring 1980 but have moved or been transferred to other schools	February 1981	Margaret
Send contact letters to teachers and food service personnel	March 1981	Margaret
Give Robin information concerning names of FA's, location and date of visit	March 1981	Margaret
Plan training session	March 1981	Jo Lynn, Wilma, Karen and Margaret
Conduct training session	March 30 - April 1	Wilma, Jean, Jo Lynn
Have FA's sign travel vouchers; return vouchers to Robin to process	March 30 - April 1	Margaret, Field Assistants
Contact school by telephone to confirm testing date; record nutrition education materials received by the school; and record lunchroom schedules for various grade levels	Early April 1981	Field Assistants
Procure slide projectors and carousels	Early April 1981	Margaret
Send adult forms (i.e., administrator, teacher, parent and food service personnel) to schools	April (One week prior to testing)	Margaret

Evaluation Activities	Target Dates	Personnel
Conduct Spring 1981 assessment	April 6-30, 1981	Field Assistants
Return data to Annex	Immediately after testing	Field Assistants
Organize data	April 1981	Technical Assistants
Program and run data	May 1981	Paul and Sheldon
Analyze and report data	May 1981	Jo Lynn, Jean, Cagle, Karen and Margaret

NET SCHOOL INFORMATION SHEET

Name of School ____________________ School System ____________________

Contact Person ____________________ Telephone Number ____________________

Name of Teacher Who Participated in NET Assessment-Spring 1980	Grade	Number of Students in Class to be Tested	Did teacher attend 1980 Nutrition Education and Training Summer Workshop?	
			Yes	No

Name of Food Service Personnel Who Participated in NET Assessment-Spring 1980	Did Food Service employee attend 1980 Nutrition Education and Training Summer Workshop?	
	Yes	No

Dates of Spring 1981 vacation (if in April): ____________________

Dates in April when we should not plan to visit your school: ____________________

____

Signature of Person Completing this Form

By January 30, 1981, please return to:

Dr. Trudy W. Banta
Bureau of Educational Research
and Service
212 Claxton Education Building
The University of Tennessee
Knoxville, Tennessee 37916

ASSESSMENT SCHEDULE

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
		1	2	3
6 Indian Springs Elem. *** Pope Elem.	7 Rock Springs Elem. *** Denmark Elem.	8 Madison Elem. *** Paul Caywood School	9 Jonesboro Middle *** Nolachuckey School West Greene HS *** Copper Hill Elem.	10 Oakdale HS Oakdale Elem. *** Mary V. Wheeler Elem.
13 Alamo Elem. *** Bells Elem.	14 Maury City Elem. Maury City HS	15 West Hardin Elem.	16 Hardin County HS (Savannah)	17 Hardin City Jr. High
20 Crossville Elem. Pomona Elem. Glen Martin Jr. High *** Baker Elem.	21 Rutherford Elem. *** East Knox County Elem. *** Richland HS	22 Trezevant HS *** Brownlow Elem. *** Hampshire Elem.	23 Georgian Hills Jr. High *** Chilhowee View Elem. *** Minor Hill Elem.	24 A. B. Hill Elem. *** Rock Creek Elem.
27 Copper Basin HS Westhaven Elem. *** Lipscomb Elem.	28 South Polk Elem. Brownsville Road Elem. *** Hobgood Elem.	29 Pikeville Elem. Raineshaven Elem. *** McFadden Elem.	30 Gadsden HS	

Comparison and Treatment Schools: Development District # 1

Personnel in district who helped in the selection/recruitment of schools: Pat Testor 323-4181

Nancy Duckworth 639-6871 (Greene County)

Code	Contact person/school/address	County	Phone No.	Grades: a. in school	Grades: b. tested	Status: C/T	Field Assistant assigned to test
05	Mrs. Katrinka K. Quillen Indian Springs Elem. School Rt. 13 333 Hill Road Kingsport, TN 37664	Sullivan	323-8832	K-6	K,3,5	C	Brenda Donaldson
33	Mr. Buford Neas Nolachuckey School Rt. 4 Greenville, TN 37743	Greene	639-7731	K-6	1,2,4,6	C	Brenda Donaldson
02	Mr. William D. Bowman Jonesboro Middle School 308 Forest Drive Jonesboro, TN 37659	Washington	753-4681	5-8	6,7,8	C	Charles Faddis
01	Allen Hendrickson Rock Springs Elementary Rt. 17, Moreland Dr. Kingsport, TN 37764	Sullivan	239-5143	K-6	K-5	T	
04	Reba Robinette James Madison Elementary 200 Greenway Kingsport, TN 37660	Sullivan	245-2512	K-5	K,3,5	T	Charles Faddis

1. Comparison and Treatment Schools: Development District # 2

Personnel in district who helped in the selection/recruitment of schools: ____________________

Code	Contact person/school/address	County	Phone No.	Grades:		Status: C/T	Field Assistant assigned to test
				a. in school	b. tested		
13	Mr. David Wetzel East Knox Co. Elem. 9315 Rutledge Pike Mascot, TN 37806	Knox	933-3493	K-8	1,2,4, 6,7,8	C	Charles Faddis
41	Mr. David Cook Chilhowee View Elem. School Wilkinson Pike Maryville, TN 37801	Blount	982-1862	K-5	K,3,5	C	Charles Faddis
09	Mr. Paul Scarbrough Oakdale H.S. Wartburg, TN 37829	Morgan	369-3885	9-12	9,10,11,12	C	Martha Jones
10	Mr. Paul Scarbrough Oakdale Elementary Wartburg, TN 37829	Morgan	369-3885	K-8	1,6	T	Charles Faddis
08	Dorothy P. Griffey Brownlow Elem. 1305 Luttrell St. Knoxville, TN 37917	Knox	525-3187	K-6	K,3,5	T	Charles Faddis

Comparison and Treatment Schools: Development District # 3

Personnel in district who helped in the selection/recruitment of schools: Barbara Chambers, Blount Co.

Code	Contact person/school/address	County	Phone No.	Grades:		Status: C/T	Field Assistant assigned to test
				a. in school	b. tested		
11	Katha Pegram Charles Reid Copper Hill Elem. Drawer U Copperhill, TN 37317	Polk	496-3341 ext. 252	K-8	K,2,5,7,8	C	Kathy Wilson
14	Mr. Danny E. Rodgers Copper Basin High School P.O. Box 909 Copperhill, TN 37317	Polk	496-3341 ext. 261	9-12	9,10,11,12	C	Charles Faddis
24	Mr. David Bayless Mary V. Wheeler Elem. Rt. 4 Pikesville, TN 37367	Bledsoe	881-3394	K-8	1,2,4,6	C	Kathy Wilson
17	Andrew Harbison South Polk Elem Old Fort, TN 37362	Polk	338-2841 ext. 262	K-8	K,3,5	T	Charles Faddis
27	Venia Etta McJenkin Pikeville Elem P.O. Box 869 Pikeville, TN 37367	Bledsoe	447-2457	K-8	1,2,4,6	T	Charles Faddis

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Comparison and Treatment Schools: Development District # 4

Personnel in district who helped in the selection/recruitment of schools: Imogene Teeples

Code	Contact person/school/address	County	Phone No.	Grades:		Status: C/T	Field Assistant assigned to test
				a. in school	b. tested		
44	Maureen Hodges Crossville Elem. School 914 W. 4th Street Crossville, TN 38555	Cumberland	484-6635	K-6	K,1,2,4	T	Martha Jones
47	Jerry Robinson Glen Martin Jr. High 314 S. Miller Ave. Crossville, TN 38555	Cumberland	484-7547	7-9	7,8,9	C	Charles Faddis
46	Reba Reed Pamona Elem. School Rt. 9, Box 277 Crossville, TN 38555	Cumberland	484-4836	K-6	K-6	T	Patricia Landen

Comparison and Treatment Schools: Development District # 5

Personnel in district who helped in the selection/recruitment of schools: Dorothy Beeler(Williamson Co.) 794-1831
Pauline Blankenship (Murfreesboro City)
893-9110

Code	Contact person/school/address	County	Phone No.	Grades: a. in school	Grades: b. tested	Status: C/T	Field Assistant assigned to test
28	Jesse Frank Lipscomb Elem Rt. 1 Brentwood, TN 37027	Williamson	794-3022	K-6	1,2,4,6	C	Kathy Wilson
25	Frank Turner Hobgood Elem. School 307 Baird Lane Murfreesboro, TN 37130	Rutherford	893-2314	K-6	K,3,5	C	Kathy Wilson
35	Don Johnson McFadden Elem. School 221 Bridge Ave. Murfreesboro, TN 37130	Rutherford	893-7251	K-6	K,3,5	T	Kathy Wilson
37	Ray Byrd Gladeville Elem. Gladeville, TN 37071	Wilson	444-5694	K-6	1,2,4,6	T	Kathy Wilson

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Comparison and Treatment Schools: Development District # 6

Personnel in district who helped in the selection/recruitment of schools: ____________

Code	Contact person/school/address	County	Phone No.	Grades: a. in school	Grades: b. tested	Status: C/T	Field Assistant assigned to test
31	Mr. Willard Davis Minor Hill Elem. School Box 99 Minor Hill, TN 38473	Giles	565-3117	K-8	1,2,4,6	C	Kathy Wilson
38	Mr. Larry Duvall Hampshire Elem. School Hampshire, TN 38461	Maury	285-2300	K-12	K,3,5,7,8	C	Kathy Wilson
36	Mr. Wayne Hobbs Richland H.S. Rt. 1 Lynnville, TN 37206	Giles	527-3577	9-12	9,10,11,12	C	Kathy Wilson
06	Mr. Danny D. Brown Rock Creek Elem. School Rt. 1, Box 7 Estill Springs, TN 37330	Franklin	649-5435	K-6	K,3,5	T	Kathy Wilson
02	Eloise Dabney J. R. Baker Elem. Hampshire Pike Columbia, TN 38401	Maury	388-3319	K-6	1,2,4,6	T	Kathy Wilson

Comparison and Treatment Schools: Development District # 7

Personnel in district who helped in the selection/recruitment of schools: Mrs. Costello 784-4672

Code	Contact person/school/address	County	Phone No.	Grades: a. in school	Grades: b. tested	Status: C/T	Field Assistant assigned to test
20	Hilda Mount James B. Garner Maury City Elem. School Box 68 Maury, TN 38050	Crockett	(901) 656-2831	K-3	1,2	C	Kathy Wilson
22	James B. Barner Maury City High School Box 68, College Street Maury, TN 38050	Crockett	656-2244	4-12	4,6,7,8,9, 10,11,12	C	Martha Jones
15 269	Charles N. Legget Gadsden Special School Gadsden, TN 38337	Crockett	784-4672	6-12	6	C	Marilynn Perry
26	Pauline Wade Elliott Crockett Co. Elem. School Conley Rd. Alamo, TN 38001	Crockett	696-5583	K-6	K,3,5	T	Kathy Wilson
29	Bill Emerson Bells City Elem. School Box A Bells, TN 38006	Crockett	663-2041	K-6	1,2,4,6	T	Martha Jones
12	James Orr Rutherford Elem. Rutherford, TN 38369	Gibson	(901) 665-6180	K-6	K,3,5	C	Robert McMichael

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Comparison and Treatment Schools: Development District # 8

Personnel in district who helped in the selection/recruitment of schools: ______________________

____

Code	Contact person/school/address	County	Phone No.	Grades:		Status: C/T	Field Assistant assigned to test
				a. in school	b. tested		
39	Leonard Pearson Pope Elem School Rt. 1 Jackson, TN 38301	Madison	(901) 668-0350	K-5	1,2,4	C	Martha Jones
32	Bryan W. Black West Hardin Elem. Rt. 1, Box 240E Adamsville, TN 38310	McNairy	(901) 632-0413	K-6	K,3,5	C	Charles Faddis
13	Patricia P. Williams (Home Ec. teacher) Central High School Pickwick State Road Savannah, TN 38372	Hardin	(901) 925-3976	10-12	10,11,12	C	Charles Faddis
07	Mr. J. Stephen Smith Hardin County Jr. Hi. School Rt. 4 Lacefield Dr. Savannah, TN 38372	Hardin	(901) 925-9037	7-9	9	C	Charles Faddis
18	Ava Johnsey Mr. Ernest Golden Denmark Elem. School Rt. 1 Denmark, TN 38391	Madison	(901) 427-5986	K-6	1,2,4,6	T	Martha Jones
40	Dr. Billy A. Belew Paul G. Caywood School 162 Monroe Street Lexington, TN 38351	Henderson	(901) 968-8457	K-8	K,3,5,7,8	T	Martha Jones

Comparison and Treatment Schools: Development District # 9

Personnel in district who helped in the selection/recruitment of schools: Helen Burke (901) 454-5516

Code	Contact person/school/address	County	Phone No.	Grades:		Status: C/T	Field Assistant assigned to test
				a. in school	b. tested		
16	Mr. James O. Catchings A.B. Hill Elem. School 1372 Latham Rd. Memphis, TN 38106	Shelley	(901) 942-4922	K-6		C	Marilynn Perry
19	Mr. George Watkins Westhaven Elem. School 4505 Hodge Rd. Memphis, TN 38109	Shelley	(901) 789-1550	K-6	K,3,5	C	Marilynn Perry
21	J. Pat Fleming Brownsville Rd. Elem. 5292 Banbury Rd. Memphis, TN 38134	Shelby	(901) 386-6921	K-6	1,2,4,6	T	Marilynn Perry
23	Louise Moody Nancy K. Holmes Raineshaven Elem. 430 Ivan Rd. Memphis, TN 38109	Shelby	893-2020	K-6	K,3,5	T	Marilynn Perry
43	Catherine Macdonald John S. Hamilton Trezevant High School 3350 Trezevant Memphis, TN 38127	Shelby	357-9013	10-12		C	Marilynn Perry

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1981 NET Assessment Form

Name of School:___________________________

Name of Contact Person:___________________________

1. The NET testing date proposed in the enclosed letter is Acceptable _______ Impossible _______.
   If the date is impossible, please specify one that would be more acceptable _______.
2. Are food choices for students offered in your school lunchroom? Yes ☐ No ☐
   If yes, what choices do students have?___________________________
3. Please mark the appropriate alternative:
   ___(a) The school lunch menu for our school district is set by the central administration.
   ___(b) Food service personnel in my school have a voice in planning the menu.
4. Who is the person in charge of your school cafeteria?_______________
   How many additional food service personnel are employed in the cafeteria?_______
5. During the past year has your school received any free nutrition education materials from the State Department of Education? ____ Yes ____ No
   If yes, please mark the appropriate category or categories below:
   ___(a) "Food Your Choice" (Dairy Council Materials)
   ___(b) Films
   ___(c) "Goody Box"
   ___(d) Other. Please specify. ___________________________
6. Teachers in your school may have had an opportunity to participate in NET training workshops offered last summer by the University of Tennessee. In addition to that training have your school personnel received any other State-funded training in nutrition education during the past year? ____ Yes ____ No
   If yes, please mark the appropriate category or categories below:
   ___(a) Dairy Council Workshop
   ___(b) Inservice training
   ___(c) Nutrition instruction through newsletters
   ___(d) Other, Please specify. ___________________________
7. Do you have a carousel slide projector in working order that we could use for testing Grades K-1 (if applicable) on the testing date proposed for your school? ___ Yes ___ No

Thank you for your cooperation.
Please return in the enclosed reply envelope to:

Dr. Trudy W. Banta
Bureau of Educational Research and Service
University of Tennessee
2046 Terrace Avenue
Knoxville, Tennessee 37916

APPENDIX L

MATERIALS USED IN RECRUITING AND SELECTING FIELD ASSISTANTS

318

Field Assistant Application

Name ______________________________

Current Address ______________________________

Telephone ______________________________

Educational Background:

Degree Obtained	Date	Institution Granting the Degree

Work Experience: (Most recent first)

Dates	Position	Place of Employment	Name of Supervisor or Reference Person (List telephone number)

Date you would be available to begin work ______________________________

What days of the week would you be available for work? ______________________________

Outline for Group Interview with Field Assistant Applicants

(Describe work of Field Assistant.) We'd like to ask you in a group to tell us about your own experience which is related to this work.

1. Tell us briefly about your recent experience in working with children or adolescents.
2. Do you prefer to work with a particular age group?
3. Have you had experience in administering tests? Please describe.
4. Have you had course work or experience in research methods?

****

Outline for Individual Interview

1. Does the job of Field Assistant offer some things you would really like in a position? Dislike?
2. (We describe the work setting and personnel involved.) Would you feel comfortable (be able to work well) in this kind of setting?
3. What would you do if the principal or contact person were not there when you arrive?
4. Do you feel comfortable working in new situations and meeting people for the first time?
5. Is there anything about this work situation that worries you at this point?
6. Would you be able to travel and spend up to three nights at a time away from home?
7. How much time could you devote to this work?

Check telephone numbers for references given on Application.

Field Assistant Interview Evaluation

Applicant's Name________________________________

	Poor 1	Fair 2	Good 3	Very Good 4	Excellent 5
1. Exhibits poise in interview setting.					
2. Presents acceptable physical appearance (neat, clean, pleasant).					
3. Exhibits adequate verbal ability (good grammar, avoids excessive "you know's" or over-verbalization).					
4. Demonstrates ability to work with people.					
5. Makes good first impression.					
6. Has had successful experience administering tests.					
7. States feeling of ease in new situations.					
8. States interest in jobs requiring organization.					
(Check references for Items 10-12)					
9. Is dependable.					
10. Has ability to organize time and materials.					
11. Has ability to complete the task (transportation, time, resources, availability).					
(column totals)					
Columns + Rows	X1 +	X2 +	X3 +	X4 +	X5 =

12. Number of nights applicant is willing to stay overnight. 0 1 2 3 4 5

13. Specific positive or negative impressions of applicant.

____

____

____

APPENDIX M

MATERIALS USED IN TRAINING FIELD ASSISTANTS AND MANAGING THEIR ACTIVITIES

AGENDA

9:00 - 9:15	Introductory Remarks	Trudy Banta
9:15 - 10:00	Employment & Travel Information	Robbin Huggins
10:00 - 10:10	Overview of Training Session	Wilma Jozwiak
10:10 - 10:40	Contacting Schools	Wilma Jozwiak
10:40 - 11:10	Picking Up & Returning Materials & Equipment	Pat Keck
11:10 - 11:25	Break	
11:25 - 12:10	Explanation of Food Consumption Observation	Jean Skinner
12:10 - 12:40	Food Consumption Observation Practice	
12:40 - 1:30	Lunch	
1:30 - 2:00	Coding	Wilma Jozwiak
2:00 - 2:15	Explanation of Testing Process from Teacher/Student Perspective	Jo Lynn Cunningham
2:15 - 3:15	Student Testing	Margaret McCabe
3:15 - 4:00	Adult Testing	Margaret McCabe
4:00 - 4:30	Questions and Answers	

TENNESSEE NUTRITION EDUCATION EVALUATION

Guidelines for Field Assistants

We are happy to have you working on the Nutrition Education and Training Program (NET) evaluation team as a Field Assistant (FA). Your job is an important one; the data you will collect will help us determine if the Tennessee NET program is accomplishing its goals. We have compiled these Guidelines from suggestions given by field assistants and others who participated in the 1980 spring assessment. We hope the Guidelines will provide information which will be useful to you in the 1981 assessment.

The Guidelines are presented in three sections:

(1) Contact with schools
(2) Testing
(3) Plate Waste Observation
(4) Collecting and organizing data.

Activities discussed under each heading appear sequentially, i.e., in the order in which tasks should be completed.

Contact with Schools

In early January 1981 principals whose schools will be involved in the assessment received a brief letter explaining the purpose of the 1981 assessment. Principals were asked to supply a list of teachers and food service personnel who participated in the 1980 assessment and thus would be participating again in the Spring 1981 assessment. In March a second set of letters was sent to principals, teachers, and food service personnel. These letters contained information concerning the Spring 1981 assessment and abbreviated versions of some of the instruments to be used during the assessment. Also, members of the NET evaluation team have contacted each school principal to establish a date for testing. In short, school personnel will know something about NET and about their participation in the project before you arrive. However, in addition to these initial contacts with school staff, you should contact each school principal by telephone as soon as possible.

During this conversation with the principal, you should:

(1) Verify the date that has been set for testing.

(2) Ask that any grade located in an open space setting be allowed to use a self-contained classroom or other quiet setting for testing.

(3) Request that Kindergarten and Grade 1 testing take place in a room that can be darkened during the time when slides are being shown.

(4) Verify that each Kindergarten and Grade 1 teacher will make arrangements in advance for having approximately five older children (from Grade 5 or above) in their classroom to assist with the testing of the younger children.

In talking with each principal, it is important to be courteous and professional. Tell the principal your name and state your business. It is extremely important for this project that you keep the appointment. If an emergency arises, contact Margaret McCabe at 974-5316 or 966,6300, or Pat Keck at 974-4165 or 966-2495 immediately. If the principal asks any questions you cannot answer, tell him/her you will obtain the information and telephone promptly to convey it. Be sure to:

(1) Ask for specific directions to the school;

(2) Ask for a number to telephone in case you cannot find the school

(3) Ask the principal if there are any motels he/she could recommend (if you are staying overnight).

Again, be sure to be courteous and professional in your approach. First impressions are important and sometimes lasting.

Travel Information

During the training session you will be asked to sign a UT Travel Authorization specifying the dates, location, and purpose for your travel. These forms will be collected during the training session and processed through University channels. If you need a travel advance, you should obtain your processed Authorization from the BERS Annex (974-4165) and take it to Andy Holt Tower, Room 301 to obtain the advance.

The University pays full transportation costs plus a maximum of

$27.00	per day for lodging
$ 3.00	per day for breakfast
$ 4.00	per day for lunch
$ 7.00	per day for dinner
$51.00	

You must have hotel and parking receipts and a copy of your airline tickets in order to be reimbursed. The University will not pay for excessive use of taxis.

Contact Robin Huggins (974-4165) for information concerning plane reservations and use of University cars.

Testing

Each FA will be trained in a role-playing situation to administer the assessment instruments at each level: K-1, 2-3, 4-6, 7-10, and 10-12. You should organize testing mateials in advance of the trip to the school; the need to be organized in advance cannot be over-emphasized. Also, be sure to visit the school on the day and at the time you have scheduled the appointment for testing. School personnel are busy people; they do not have time to wait for you to arrive or for you to spend time organizing materials after you have arrived. The following is a list of preparations for testing:

(1) Organize materials before going to the school. Essential materials include:

Letter of introduction
Directions to the school
Letter identifying participating classrooms in the school
Organizing folders or envelopes
Paper clips and rubber bands
Assessment instruments
Plate waste forms
Optical scan forms
Pencils
Slides (for K-1 testing)
Carousel slide tray
Carousel slide projector
Extension cord
Extra set of adult assessment instruments (parents, teachers, administrators, food service personnel)

(2) Be sure to carry extension cord, slide projector, slide carousel, and slides to every school at which you will test a Kindergarten or first grade group. Have slides assembled before going into the school. Check the projector to be sure it works before taking it out of the Annex. Be sure you are familiar with the slides, as well.

(3) Wear a conspicuous name tag for identification.

(4) Bring a copy of the letter from the principal which identifies the teachers and classrooms participating in the assessment. Also, bring a copy of your letter of introduction. Know the name of your contact person. If the principal is not available, present your letter of introduction and the principal's letter to the school secretary and ask if you may proceed with the testing.

(5) Proceed to identified classrooms according to your testing schedule. (Testing schedules will be distributed during the training sessions). Be sure to greet each teacher, introduce yourself, and explain testing procedures.

(6) If possible, set up the projector and other materials before children enter the room. BE SURE to allow adequate time before and after testing Kindergarten or first grade classes so that you can set up and put away the slide equipment.

(7) When working with the K-1 level, remind the teacher that at least five older children should be available to assist with the testing. Testing at this level is difficult without assistance. However, if no older children are available, proceed with testing and ask the teacher for assistance in helping children move from frame to frame.

(8) Instruct the five older students to help K-1 children move to consecutive frames of the answer sheet. Older students should be told firmly that they are not to help younger children choose responses.

(9) Before testing begins, encourage all students to answer the questions as best they can. Because some items are easy and some hard they should be cautioned not to become upset if they cannot answer every item. Emphasize that they will not be graded on this test, but that the test is very important to NET in finding out what children in Tennessee know about nutrition.

(10) Stay within the time allocation for each classroom or grade level so you will have enough time to administer each set of instrume s

(11) Follow the testing procedures for each developmental level outlined during the training sessions.

Plate Waste Observation

Another aspect of this assessment is the observation of eating behav r of students--how much food do they eat in the school lunchroom? This is determined by observing how much food is wasted (i.e., how much food is left on the plate and how much milk is left in the carton after the child has finished his/her lunch).

You will observe plate waste only in those grades (K06) which you are testing. (Remember, teachers in Grades 7-12 have been requested to have their students fill out Food Consumption Forms.) Determine the lunch tim for the classes being tested by looking at your School Information Sheet. Verify this time with each teacher whose class you are testing; also request that he/she hold his/her class at the table when they have finished eating so you can observe their trays before they bus them.

Be sure to schedule your day so that you will have time to observe during these lunch times, as well as conducting the paper-and-pencil testin in the classrooms. When conducting plate waste observations, follow these procedures:

- Proceed to the lunchroom about 15-20 minutes prior to the scheduled lunch period of the first class to be observed,
- At the top of the form where indicated, write the school name, teacher's name, and grade.
- Carefully observe the serving line to determine the available foods and the approximate serving size.
- Write the names of the available foods in the appropriate spaces on the instrument.
- Find the teacher of the class you are to observe.
- Ask her/him to point out the tables used by the class. Be sure to determine where that class ends and another begins.
- Randomly choose 5 children from each class you observe. Do not choose 5 children who are sitting together. One way to choose randomly is to use each 4th or 5th child as you move around the table.
- Approach the chosen child. Ask him/her to tell you what she/he bought for lunch.
- Observe the child's tray. Estimate the amount of food left in each category, using the code provided on the instrument. Estimate the amount of liquid left in opaque containers (such as milk cartons) by the weight.
- Complete one class before observing another. Use a new instrument for each class.

Collecting and Organizing Data

This is the last phase of the assessment and a very important one. Listed below are the steps for collecting and organizing data:

(1) After tests have been administered at each grade level, collect the instruments. Keep scan sheets and test questions together until scan sheets have been coded (see Coding Manual for instructions). Store papers in appropriate folders which will be labeled by grade level.

(2) Assessment instruments for parents and teachers as well as Food Consumption Forms for Grades 7-12 will be mailed to schools several days prior to your arrival. Teachers of students in Grades 7-12 have been requested to administer these Food Consumption Forms to their students several days before the testing date for their school. Parent forms should have been sent home with students and returned to the school before the assessment date. Teacher forms also should have been received and completed before your arrival. Collect parent and teacher forms and Food Consumption Forms (Grades 7-12) from each participating classroom. Answer sheets for the parent instrument are attached to the questions. However, teachers answer their questions on scan forms. It is important to keep answer sheets and questions together until the scan sheets are coded (see Coding Manual for instructions).

(3) Instruments for administrators (principals, assistant principals, curriculum supervisors, counselors), food service managers, and food service workers also will be mailed to the school and distributed several days prior to the student assessment date. It is your responsibility to collect these forms from the administrator(s) and participating food service personnel. Please remember to be courteous and considerate. Do not ask food service workers for their questionnaires while they are busy with lunchroom duties; do not disturb the administrator while he/she is talking on the telephone, conducting a meeting, or holding a conference. Answer sheets for food service personnel forms are attached to the questionnaire. However, answer sheets for administrators are scan forms which must be kept with the questions until the scan forms are coded (see Coding Manual for instructions).

(4) Double check your schedule to be sure each grade level and/or classroom has been tested and that answer sheets and testing instruments have been collected. Also check to be sure all teacher, parent, administrator, and food service personnel forms have been collected and organized in the appropriate folders or envelopes.

(5) Deliver data, assessment instruments, and testing equipment to BERS Annex as soon as possible. While you are at the Annex, fill out an Assessment Evaluation form which the technical assistant will give you. Receipt of your paycheck will be contingent upon delivery of all testing materials, coded scan forms, and completion of the Assessment Evaluation form.

Coding Instructions
for
NET Field Assistants

As a Field Assistant, you will be responsible for entering certain information on the scan forms used as answer sheets by some of our respondents. In addition, you will be responsible for entering certain information on the self-contained instruments used by K-1 and 2-3 students and parents (Forms 9, 8, and 0, respectively). Entering this information is called coding.

CODING SELF-CONTAINED INSTRUMENTS (Forms 0, 8, and 9)

1. School and Form Code (3 digits)

   - The first two digits of the School and Form Code correspond to the school code by which each school is identified.
   - The third digit of the School and Form Code corresponds to the form number. (School codes and form numbers are presented in tables at the end of this section of your handbook)

Enter the School and Form Code on the line labeled "Code." The line labeled "Code" is found

- on Page 9 of Form 0
- on Page 6 of Form 8
- on Page 5(s) of Form 9

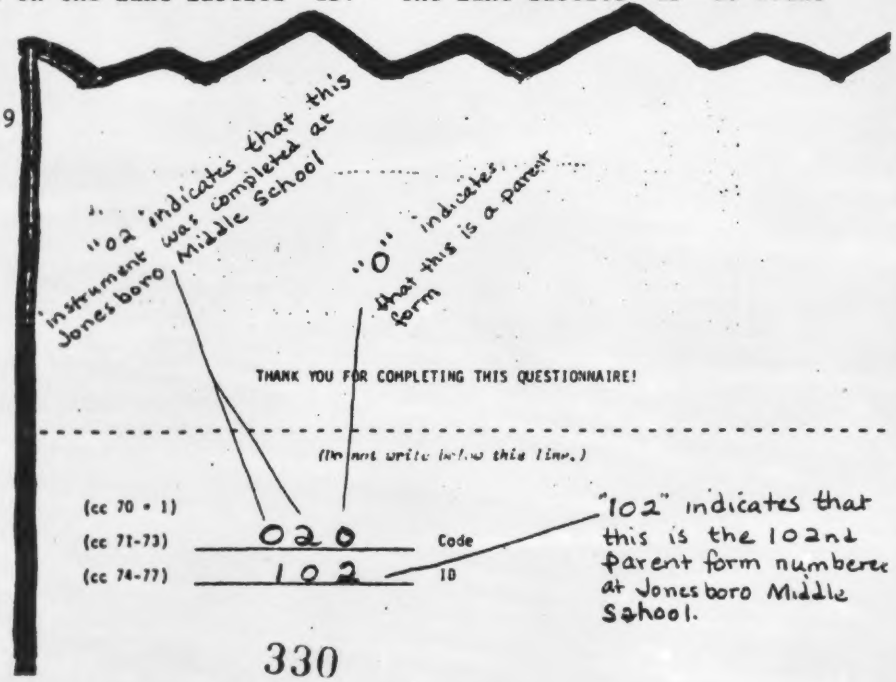
2. ID Number (3 digit)

   Every self-contained instrument (Forms 0, 8, and 9) must be numbered. ID numbers for each different form of these instruments within a given school must begin at 001, and be numbered consecutively. For example, if there are 115 parent forms (Form 0) received from all grades tested in a school, they must be coded 001 through 115. If there are 48 K-1 forms (Form 9) in the same school, they must be coded 001 through 048.

The ID number must be entered on the line labeled "ID." The line labeled "ID" is found

- on Page 9 of Form 0
- on Page 6 of Form 8
- on Page 5(s) of Form 9

AN EXAMPLE OF
SCHOOL AND FORM CODE ENTRY



"02" indicates that this instrument was completed at Jonesboro Middle School

"0" indicates that this is a parent form

THANK YOU FOR COMPLETING THIS QUESTIONNAIRE!

(Do not write below this line.)

(cc 70 • 1)
(cc 71-73) 020 Code
(cc 74-77) 102 ID

"102" indicates that this is the 102nd parent form numbered at Jonesboro Middle School.

CODING OPTICAL SCAN SHEETS (Form 1, 2, 3, and 4)

All items in Section III of Form 4, Section IV of Forms 1 and 2, and Section V of Form 3 require the respondent to record his/her answer directly on the question sheet. It is your responsibility to transfer these answers to the optical scan sheet.

In the right-hand margin of these sections you will find a row of numbers in parentheses. These numbers indicate where the responses should be coded on the optical scan form.

1. All four forms have items which are coded in sequence beginning with 101. You must code these responses on Side Two of the optical scan sheet by the corresponding number.

   Use the following guide to mark the responses on the optical scan form:

   If the respondent's answer was a "yes" on a "yes-no" option

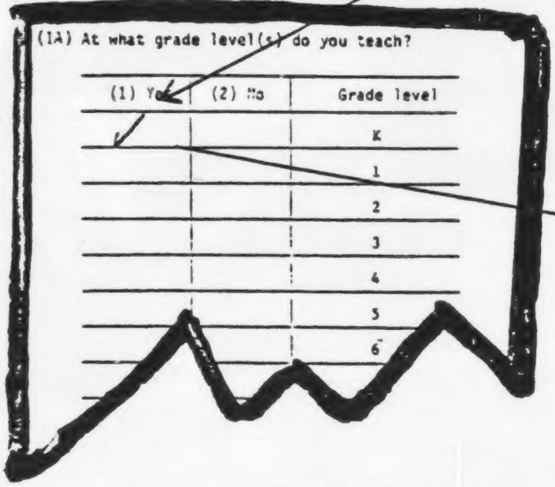
   OR

   If the respondent checked the response column numbered "1"

   Shade in the "A" circle next to the corresponding number

If respondent's answer is "yes" in a "yes-no" format:

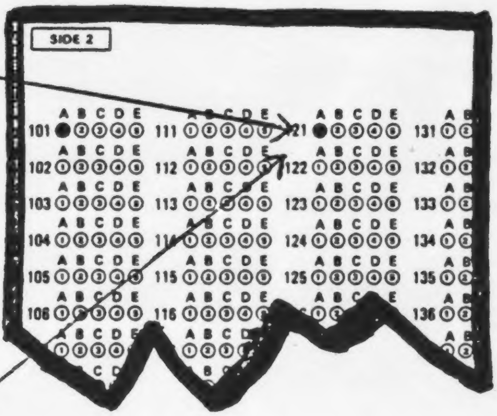
(EXAMPLE)



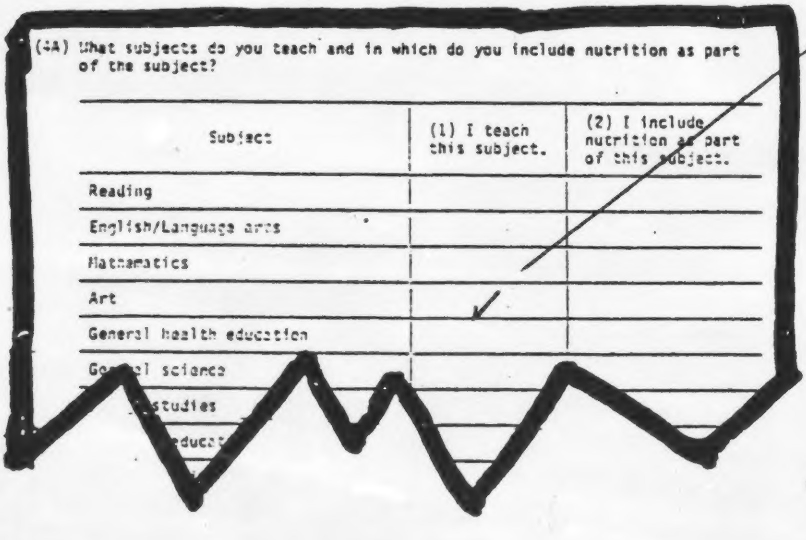
(1A) At what grade level(s) do you teach?

(1) Yes	(2) No	Grade level
✓		K
		1
		2
		3
		4
		5
		6

Shade in the "A" circle



If respondent checked the response column marked "1":



(4A) What subjects do you teach and in which do you include nutrition as part of the subject?

Subject	(1) I teach this subject.	(2) I include nutrition as part of this subject.
Reading		
English/Language arts		
Mathematics		
Art	✓	
General health education		
General science		

1. (Continued)

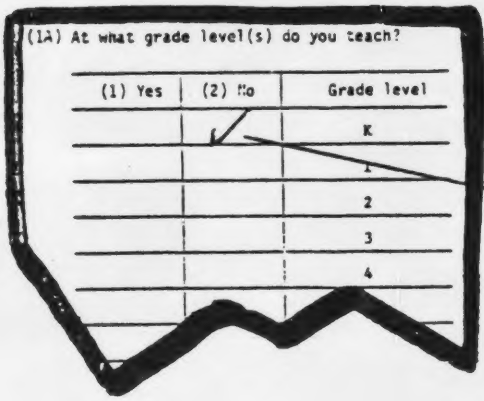
If the respondent's answer was a "no" on a "yes-no" option

OR

If the respondent checked the response column numbered "2"

Shade in the "B" circle
next to the corresponding number

If the respondent's answer was "no" on a "Yes-No" Format:

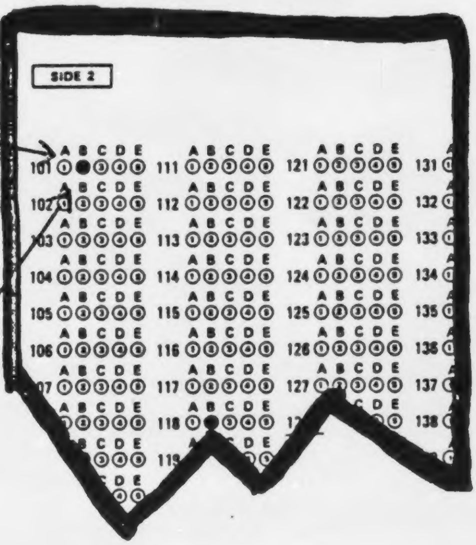


(1A) At what grade level(s) do you teach?

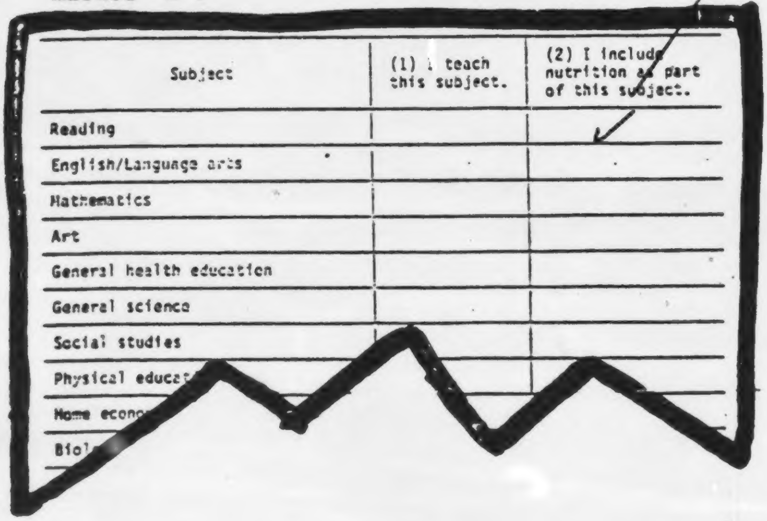
(1) Yes	(2) No	Grade level
	✓	K
		1
		2
		3
		4

(EXAMPLE)

Shade in the "B" circle



If the respondent checked the response column marked "2":



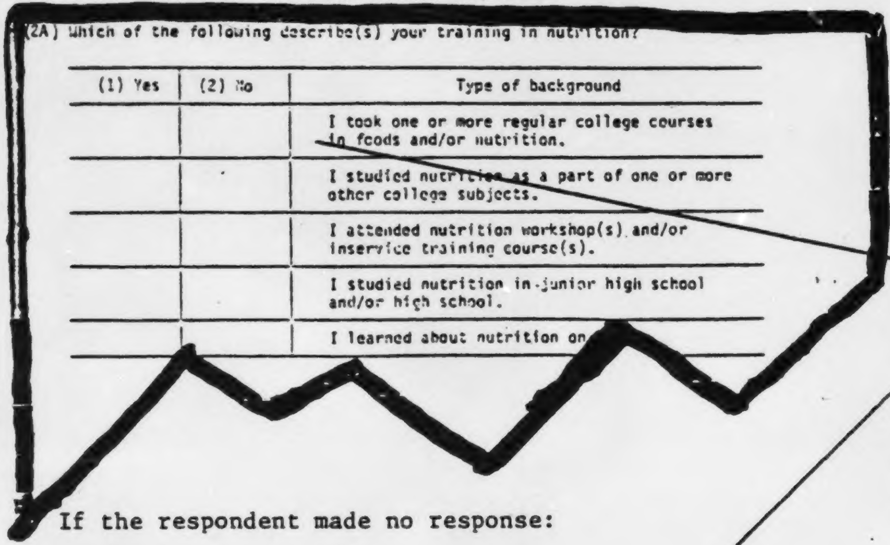
Subject	(1) I teach this subject.	(2) I include nutrition as part of this subject.
Reading		✓
English/Language arts		
Mathematics		
Art		
General health education		
General science		
Social studies		
Physical educat		
Home econo		
Biol		

1. (Continued)

If the respondent made no response

Shade in the "C" circle
next to the corresponding number

If the respondent made no response:

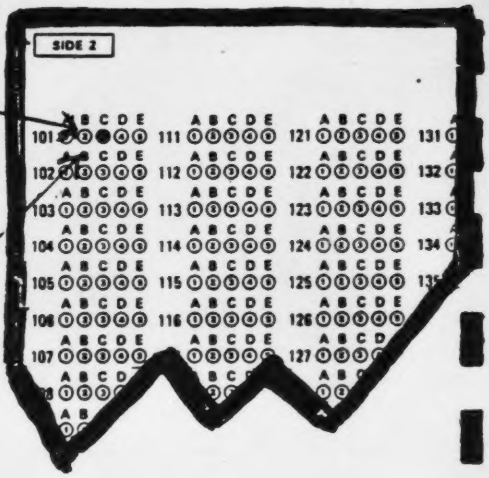


(2A) Which of the following describe(s) your training in nutrition?

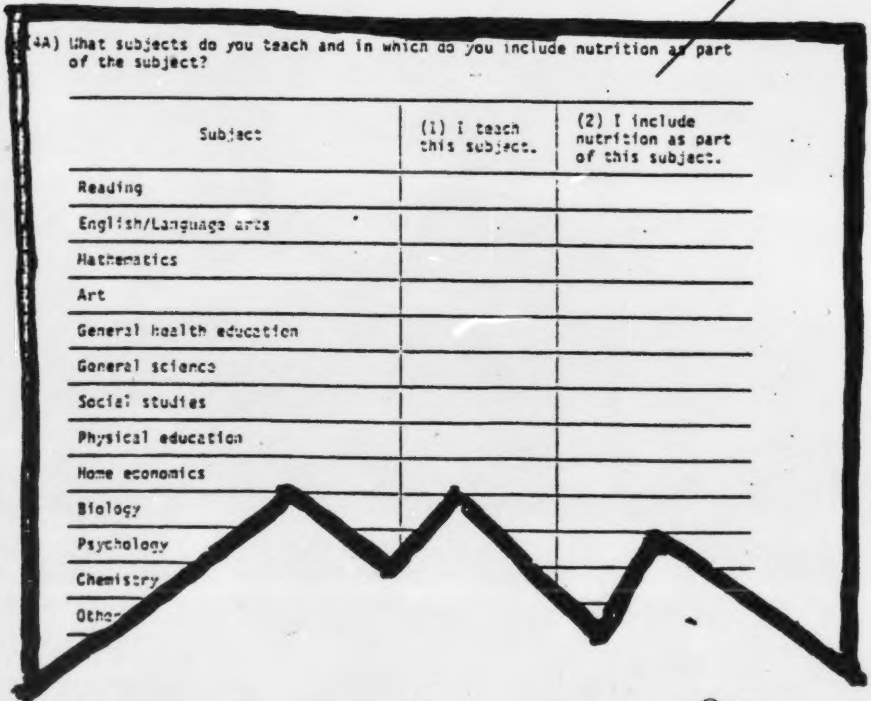
(1) Yes	(2) No	Type of background
		I took one or more regular college courses in foods and/or nutrition.
		I studied nutrition as a part of one or more other college subjects.
		I attended nutrition workshop(s) and/or inservice training course(s).
		I studied nutrition in junior high school and/or high school.
		I learned about nutrition on

(EXAMPLE)

Shade in the "C" circle



If the respondent made no response:



(4A) What subjects do you teach and in which do you include nutrition as part of the subject?

Subject	(1) I teach this subject.	(2) I include nutrition as part of this subject.
Reading		
English/Language arts		
Mathematics		
Art		
General health education		
General science		
Social studies		
Physical education		
Home economics		
Biology		
Psychology		
Chemistry		
Othe		

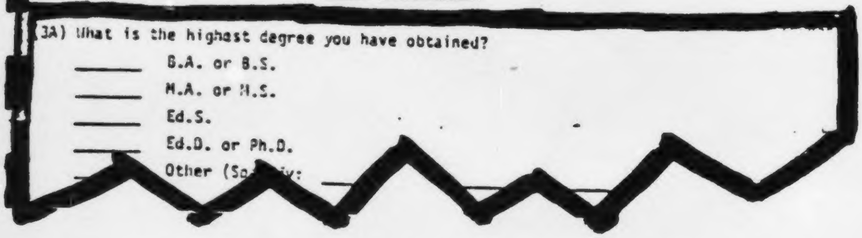
2. Forms 1, 2, and 4 have items which are coded with the letter K. These items must be recorded in the lower left corner of Side One of the optical scan form, in the K column of the "special codes" section.

   Use the following guide to mark the responses on the optical scan form:

If the response was checked

Shade in the corresponding circle in the K column

If the response was checked:



3A) What is the highest degree you have obtained?

______ B.A. or B.S.

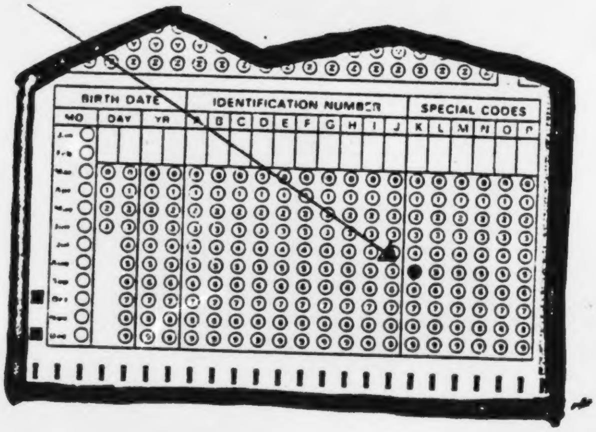
______ M.A. or M.S.

______ Ed.S.

______ Ed.D. or Ph.D.

______ Other (Sp[illegible]ify: ______

Shade in the corresponding circle in column K

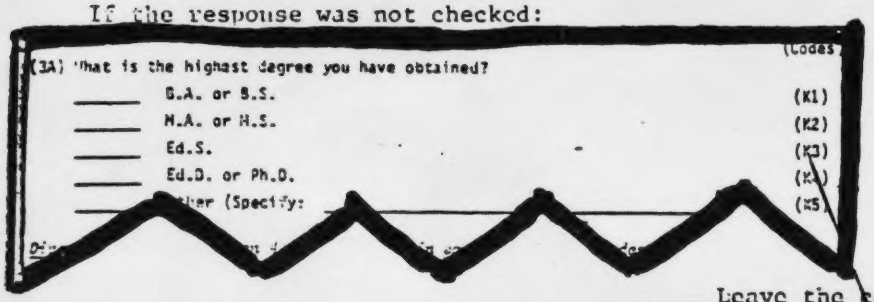


2. (Continued)

If the response was not checked

Leave the corresponding circle in the K column blank

If the response was not checked:



(Codes)

(3A) What is the highest degree you have obtained?

______ B.A. or B.S. (K1)

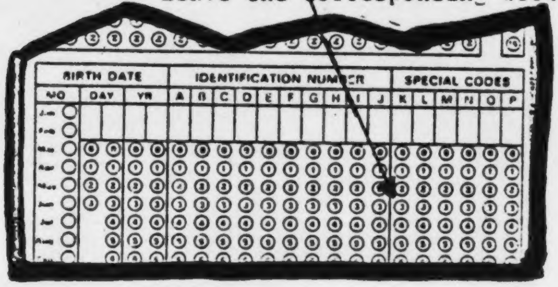
______ M.A. or M.S. (K2)

______ Ed.S. (K3)

______ Ed.D. or Ph.D. (K4)

______ Other (Specify: (K5)

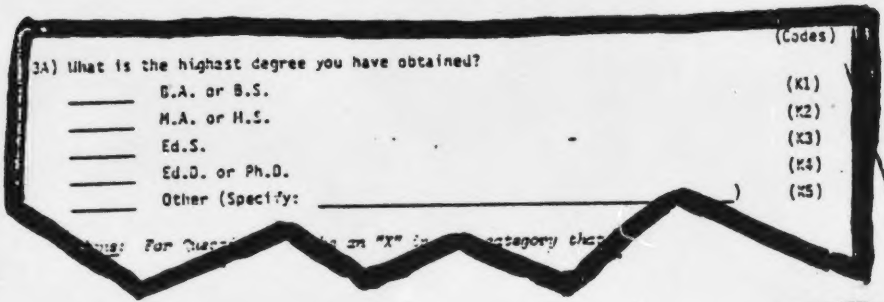
Leave the corresponding circle in column K blank.



If no responses coded K were marked

Shade in the "9" circle

If the respondent does not mark any response for the item:



(Codes)

3A) What is the highest degree you have obtained?

______ B.A. or B.S. (K1)

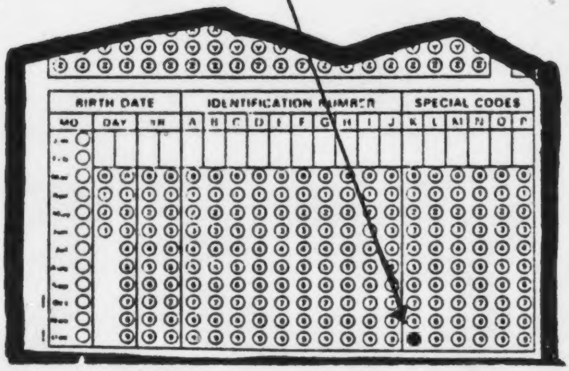
______ M.A. or M.S. (K2)

______ Ed.S. (K3)

______ Ed.D. or Ph.D. (K4)

______ Other (Specify: ______) (K5)

Shade in the "9" circle in Column K.



3. Forms 3 and 4 also have items coded with the letter A. These items must be recorded on Side One of the optical scan sheet under the heading "Identification Number." These responses are recorded in the same way that the "K" coded items are recorded, except that responses are recorded under the letter A.

A FINAL WORD: ALWAYS DOUBLE-CHECK YOUR WORK!!!

TABLE 1: INSTRUMENT CODES

Version of Instrument	Form Number
*Elementary Teachers	1
*Secondary Teachers	2
*Food Service Personnel (Managers)	3
*Food Service Personnel (Staff)	3
* Administrators	4
*Students (10-12)	5
*Students (7-9)	6
*Students (4-6)	7
Students (2-3)	8
Students (K-1)	9
Parents	0

TABLE 2: SCHOOL CODES

Code	School
01	Rock Springs Elementary School
02	Jonesboro Middle School
03	Hardin County Central High (Savannah)
04	Madison Elementary School
05	Indian Springs Elementary School
06	Rock Creek Elementary School
07	Hardin City High School
08	Brownlow Elementary School
09	Oakdale High School
10	Oakdale Elementary School
11	Copper Hill Elementary School
12	Rutherford Elementary School
13	East Knox County Elementary School
14	Copper Basin High School
15	Gadsden High School
16	A. B. Hill Elementary School
17	South Polk Elementary School
18	Denmark Elementary School
19	Westhaven Elementary School
20	Maury City Elementary School
21	Brownsville Road Elementary School
22	Maury City High School
23	Rainshaven Elementary School
24	Mary V. Wheeler Elementary School
25	Hobgood Elementary School
26	Alamo Elementary School
27	Pikeville Elementary School
28	Lipscomb Elementary School
29	Bells Elementary School
30	Fairview High School
31	Minor Hill Elementary School
32	West Hardin Elementary School
33	Nolachuckey School
34	West Greene High School
35	McFadden Elementary School
36	Richland High School
37	Gladeville Elementary School
38	Hampshire Elementary School
39	Pope Elementary School
40	Paul Caywood School
41	Chilhowee View Elementary School
42	Georgian Hills Junior High School
43	Trezevant High School
44	Crossville Elementary School
45	(no school)
46	Pomona Elementary School
47	Glen Martin Junior High School
48	J. R. Baker Elementary School

Items to Pack for Field Assistants Number Included

1. School information sheet, including classes to be tested
2. Name tags
3. Introduction letter
4. Map (?) and your directions to the school
5. Extra adult forms
    a. 30 parent/school
    b. 1 administrator/school ________
    c. 1 teacher each form/school
    d. 1 FSM/school
    e. 1 FSW/school
6. Student Forms - 30 per class tested of appropriate forms ________
7. Op-scan forms
    a. 1 per 4-12 student tested ________
    b. extras for extra adult forms ________
    c. extras for "mess-ups" ________
8. Extra Food Consumption Recalls (7-12 only) ________
9. Food Consumption Observation Forms (1 per K-6 class tested) ________
10. If testing K-1:
    a. carousel w/slides
    b. demo poster
    c. projector if not available at school, with extension cord
11. Manila envelopes, labeled, for completed instruments
12. Paper clips and rubber bands
13. Pencils (4 dozen)

NET 1981 Spring Assessment Checklist

Please take this form with you to the school to which you have been assigned. Check off each item as you complete the activity described.

BEFORE YOU LEAVE KNOXVILLE:

_____ Organize materials

__________ Letter of introduction

__________ Letter identifying participating classrooms in the school

__________ Directions to the school

__________ Slide projector

__________ Slides

__________ Demonstration poster for K-1

__________ Carousel slide tray

__________ Extension cord

__________ Student assessment instruments

__________ Pencils

__________ Extra adult assessment instruments

__________ Organizing folders or envelopes

__________ Paper clips and rubber bands

AT THE SCHOOL:

__________ Assemble slides

__________ Put on name tag

__________ Present letter of introduction to principal or secretary

__________ Locate participating classrooms

__________ Set up projector for K-1 testing

__________ Make sure older children are available to assist with K-1 testing and instruct them in their duties

__________ Test all participating classes

__________ Collect food consumption data

__________ Collect and organize in folders/envelopes all student assessment instruments

__________ Collect and organize all adult assessment instruments (parent, teacher, administrator, and food service personnel forms) and Food Consumption forms

__________ Code all scan forms and other instruments

__________ Deliver all assessment instruments and testing equipment to BERS Annex

__________ Complete Assessment Evaluation form

ASSESSMENT EVALUATION FORM

Please fill out one of these forms after each school visit. If you tested students in two or more schools, fill out one for each separate school. This information will not be used to evaluate your performance. Instead, it will provide valuable information which will be used to help other field assistants in their testing.

1. Name of Field Assistant:

2. Name of School:

3a. Did you encounter any technical problems during your visit to the school?

Yes ☐ No ☐

b. If yes, please describe these problems:

4a. Did you encounter any social problems?

Yes ☐ No ☐

b. If yes, please describe these problems:

5. How do you think problems like this could be alleviated?

6. Other comments:

APPENDIX N

SAMPLE ASSESSMENT INSTRUMENT

THE UNIVERSITY OF TENNESSEE
College of Education - Bureau of Educational Research and Service
KNOXVILLE, TENNESSEE 37916

NUTRITION EDUCATION PROJECTS
HOME ECONOMICS BUILDING

Dear Student,

We are very happy that your school has agreed to let us study what you, your teachers, the principal, and the food service workers know and think about nutrition. Your answers on this questionnaire will help us know what to teach about nutrition in school, and what the adults in your school need to know about nutrition to help you learn. You will be helping us evaluate the Tennessee Nutrition Education and Training Program (NET). The main goal of NET is to help Tennessee's children and youth to understand the relationship of food and nutrition to total health, and to use this knowledge to select a nutritious diet.

Please answer the questions on this questionnaire for students. Do not write your name on the questionnaire - we will not let anyone know what your responses were. All the answers of students in your grade will be put together so we can see what a student about your age knows and thinks about nutrition.

If you complete this questionnaire and return it to your teacher, that will show that you are willing to let us use your answers in this study. You do have the right to not complete the questionnaire, or to stop working on it if you decide later you do not wish to help on the study, without any bad feelings from us or your teacher.

Thank you for your time. We will be very interested in seeing what you know and think about nutrition!

Sincerely,

Trudy W. Banta

Trudy W. Banta
NET Evaluation Director

SECTION I

Directions: For each item in this section (Questions 1-17), mark the circle on your answer sheet which indicates how you really feel about the statement, using the following scale:

1 = Strongly disagree
2 = Mildly disagree
3 = Undecided
4 = Mildly agree
5 = Strongly agree

(1) I like the quality and variety of food and the way it is served in the food service program at my school.

(2) The food in the cafeteria at school does not look very good.

(3) The food in the school cafeteria costs too much.

(4) It is more fun to eat away from school than to eat in the cafeteria.

(5) The cafeteria at my school is not a nice place to eat.

(6) The line in the cafeteria at my school is usually too long.

(7) I like to help decide what foods will be fixed for lunch at my school.

(8) I would rather have Coke than milk with a meal.

(9) I like to find out about the backgrounds of people who give advice about food and nutrition.

(10) I would rather take vitamin pills than learn to eat new foods.

(11) I like to eat a variety of foods each day.

(12) I would rather skip a meal than to cook it myself.

(13) I like to eat low-cost foods as well as high-cost ones.

(14) It bothers me to eat foods I have not tried before.

(15) I like to know about foods that are good for me.

(16) I like to think about the nutrients in foods when I am deciding what to eat.

(17) I like to think about how the way I eat affects other people.

SECTION II

Directions: For each item in this section (Questions 18-37), mark the circle on your answer sheet which indicates how frequently you engage in the behavior described in that statement, using the following scale:

1 = Never
2 = Seldom
3 = Sometimes
4 = Usually
5 = Always

(18) I eat the plate lunch served in the cafeteria at my school.

(19) I eat foods from the fast food line in the cafeteria at my school.

(20) I eat foods from the salad bar in the cafeteria at my school.

(21) I buy the foods I eat for lunch from the Coke and candy machines at my school.

(22) I bring my lunch and eat at school.

(23) I eat my lunch at home.

(24) I eat lunch at a store or restaurant away from my school.

(25) Students at my school participate in a Youth Advisory Council (YAC) or other student organization that helps plan school lunches.

(26) I help decide what foods will be served for lunch at my school.

(27) I learn at school about foods that are good for me.

(28) I use a daily food guide to help choose the foods I eat.

(29) I prepare meals using different cooking methods.

(30) I follow good safety rules when I store and handle food.

(31) I think about my nutrient and caloric needs when I decide what to eat.

(32) When I eat at a restaurant, I try to select a balanced meal.

(33) I taste familiar foods when they are prepared in new ways.

(34) I skip meals to cut down on calories.

(35) I eat several kinds of fruits and vegetables each day.

(36) I try to make mealtime pleasant for the people with whom I eat.

(37) I use different ways to solve my food and nutrition problems.

SECTION III

Directions: For each item in this section (Questions 38-62), mark the circle on your answer sheet which corresponds to the best (most correct) of the four response choices.

(38) If a friend tells you about a new weight-loss diet, which of these is the best way to decide if it is good?

1 = Ask your doctor about the diet.
2 = Find out how many people have used the diet.
3 = See how much weight your friend has lost on the diet.
4 = Try the diet for a week to see how you feel.

(39) Which of the following factors is least important in determining your nutrient and caloric needs?

1 = Age
2 = Amount of exercise
3 = Gender (sex)
4 = Personal beliefs

(40) Which of these potatoes would be crispiest?

1 = Baked potato
2 = Fried potato
3 = Mashed potato
4 = Steamed potato

(41) In which of these ways that green pepper might be fixed would it provide the most vitamin C?

1 = Baked
2 = Broiled
3 = Fried
4 = Raw

(42) Which of the following people probably would be the most helpful in planning a low-cost menu for a party?

1 = Food chemist
2 = Home economics teacher
3 = School business manager
4 = Waitress

(43) Which of the following health conditions would be most likely to occur in teenagers who do not get enough iron in their diets?

1 = Acne
2 = Anemia
3 = Diabetes
4 = Obesity

(44) What is the most likely reason that some young people do not eat many kinds of vegetables?

1 = Their families cannot afford many kinds.
2 = They cannot get many kinds in the grocery store.
3 = They do not know how to cook many kinds.
4 = They have not learned to like many kinds.

(45) Which of the following foods would be possible to prepare in 20 minutes without use of a microwave oven?

1 = Hamburgers
2 = Homemade vegetable-beef soup
3 = Pork chops
4 = Roast beef

(46) If one of your responsibilities at home is fixing breakfast for your family and you burn the toast almost every morning, which of these would be the best thing to do?

1 = Ask to trade chores with another family member.
2 = Figure out what you have been doing wrong and try to correct it.
3 = Keep serving the burned toast and hope your family will learn to like it.
4 = Make biscuits rather than toast for breakfast.

(47) Which of the following nutrients is needed for making red blood cells?

1 = Calcium
2 = Iron
3 = Vitamin A
4 = Vitamin D

(48) What nutritional advantage does an expensive piece of steak have compared to a cheaper piece?

1 = It probably has less fat than the cheaper piece.
2 = It probably has more protein than the cheaper piece.
3 = It probably has more vitamins and minerals than the cheaper piece.
4 = It probably has no nutritional advantage over the cheaper piece.

(49) Which of the following foods is the main ingredient used in the manufacture of imitation bacon?

1 = Beef
2 = Corn
3 = Milk
4 = Soybeans

(50) Which of these problems would food and nutrition information be least likely to help solve?

1 = Frequent colds and minor illnesses
2 = Midmorning energy slumps
3 = Overweight
4 = Poor social skills

(51) Which of these fast-food meals would provide the most nutrients?

1 = Chicken, mashed potatoes, and roll
2 = Hamburger, french fries, and Coke
3 = Hot dog and milk shake
4 = Sausage-cheese pizza and salad

(52) Which of these activities that could be done during a meal probably would help people enjoy the meal more?

1 = Eating as quickly as possible
2 = Playing with a pet
3 = Settling family problems
4 = Talking with others

(53) Which of the following foods contains the most iron?

1 = Cake
2 = Hamburger
3 = Milk
4 = Pineapple

(54) If you read about ideal weight in a book on physical fitness, how can you tell how good the information is?

1 = By the background of the author of the book
2 = By the length of the book
3 = By the length of the chapter on ideal weight
4 = By the number of pictures in the book

(55) Which of the following family members needs the most protein?

1 = 10-year-old daughter who takes ballet
2 = 15-year-old son who plays football
3 = 35-year-old mother who is pregnant
4 = 37-year-old father who is a farmer

(56) Which of the following foods requires use of the fewest resources to produce?

1 = Cheese
2 = Ham
3 = Soybeans
4 = Steak

(57) Which of the following safety rules is important for frying foods?

1 = Cool the hot fat quickly with cold running water.
2 = Drop frozen foods quickly into the fat.
3 = Heat the fat quickly.
4 = Use moderate heat.

(58) If one student trying to find recipes for nutritious snacks looks through several cookbooks and another student asks several teachers for suggestions, what will they probably find?

1 = If the books are good ones, both students probably will come up with the same ideas.
2 = If the teachers all are good cooks, both students probably will come up with the same ideas.
3 = The two students may come up with either the same or different ideas.
4 = The two students probably will come up with very different ideas.

(59) Three students compared what they ate for breakfast. Karen had a hard-cooked egg, tomato juice, and cereal with milk. Bill had a hamburger and a banana milkshake. Pat had toast and orange juice. Who had nutritionally balanced breakfast(s)?

1 = None of the students
2 = Only Pat
3 = Both Karen and Bill
4 = All the students

(60) Which of the following foods contains the most calories?

1 = 1 dinner roll
2 = 1 cup whole milk
3 = 4 ounces of steak
4 = 10 potato chips

(61) If the students in your school do not like the foods served in the school cafeteria, which of the following would be the best thing to do?

1 = Encourage all students to return their food uneaten as a protest.
2 = Hope that other people in the school will do something about the situation.
3 = Organize a group of students to talk to the cafeteria manager.
4 = Stop eating in the school lunch program.

(62) What is the relationship between self-image and physical appearance of teenagers?

1 = They are related for both girls and boys.
2 = They are related for boys but not for girls.
3 = They are related for girls but not for boys.
4 = They are not related for either girls or boys.

APPENDIX O

PLATE WASTE DATA COLLECTION FORMS

PLATE WASTE DATA SHEET

School Code________________ (cc 1-2)

Field Assistant's Name________________________________ Grade________________ (cc 3-4)

Teacher__________________________ Date______________

	MAIN	BREAD	COOKED VEG #1	COOKED VEG #2	RAW VEG	FRUIT	DESSERT	OTHER	MILK
Food Name									
Amt. Served									
Child #1									
Child #2									
Child #3									
Child #4									
Child #5									
a. Sum									
b. Sum ÷5= waste/child									
c. % Waste (b X 100)	(cc5-6)	(cc7-8)	(cc9-10)	(cc11-12)	(cc13-14)	(cc15-16	(cc17-18)	(cc19-20)	(cc21-22)

0 = No Food Left
.25 = ¼ serving left
.50 = ½ serving left
.75 = 3/4 serving left
1.00 = All serving left

oz. = ounce
c. = cup
pt. = pint
t. = teaspoon
T. = tablespoon

Age ______

Sex ______

Food Consumption Form

Think about the food you bought for lunch today.

Write the name of each food or beverage (milk, tea, juice, water, etc.) you bought, in the chart at the bottom of the page.

Beside each food, list the amount you ate.

For instance:

- If you bought rice, write "rice" on one of the lines on the chart. If you got more than one helping, write how many you got.
- Next, write how much of your rice you ate. This number will go on the same line in the column headed "Amount you ate".
  - If you ate all your rice, put a 1 in that column.
  - If you ate about 3/4 (three-fourths) of your rice, put 3/4 in that column.
  - If you ate about 1/2 (one-half) of your rice, put 1/2 in that column.
  - If you ate about 1/4 (one-fourth) of your rice, put 1/4 in that column.
  - If you took only a small taste or ate none at all, put 0 in that column.
- Be sure that you have listed every food and beverage you bought and how much you ate of it. Don't forget desserts!

	List every food and beverage you bought for lunch	Amount you ate
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		